

E-15

V.G.
Jacks - Skerins, Ayles,
1 more

15⁰⁰

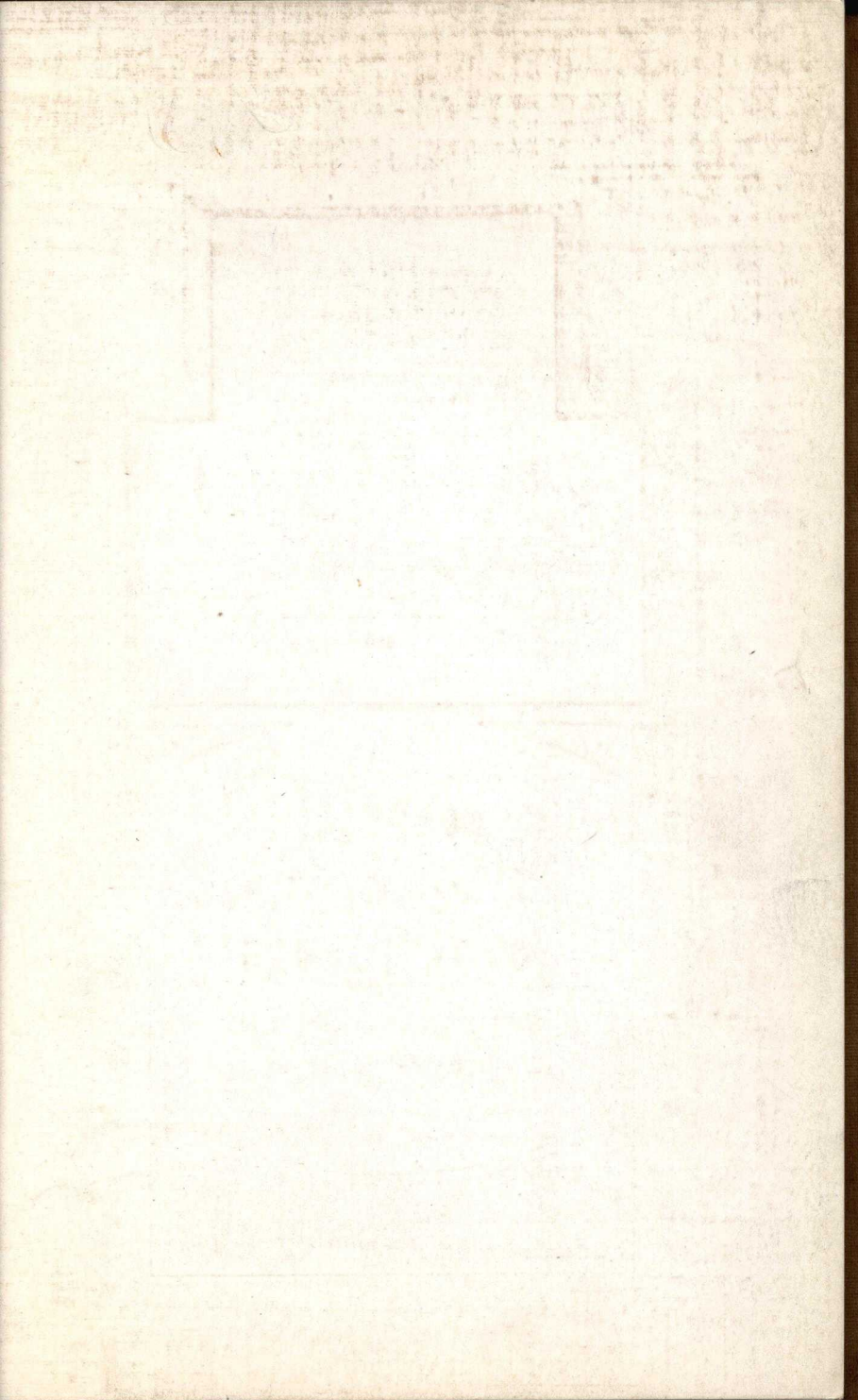
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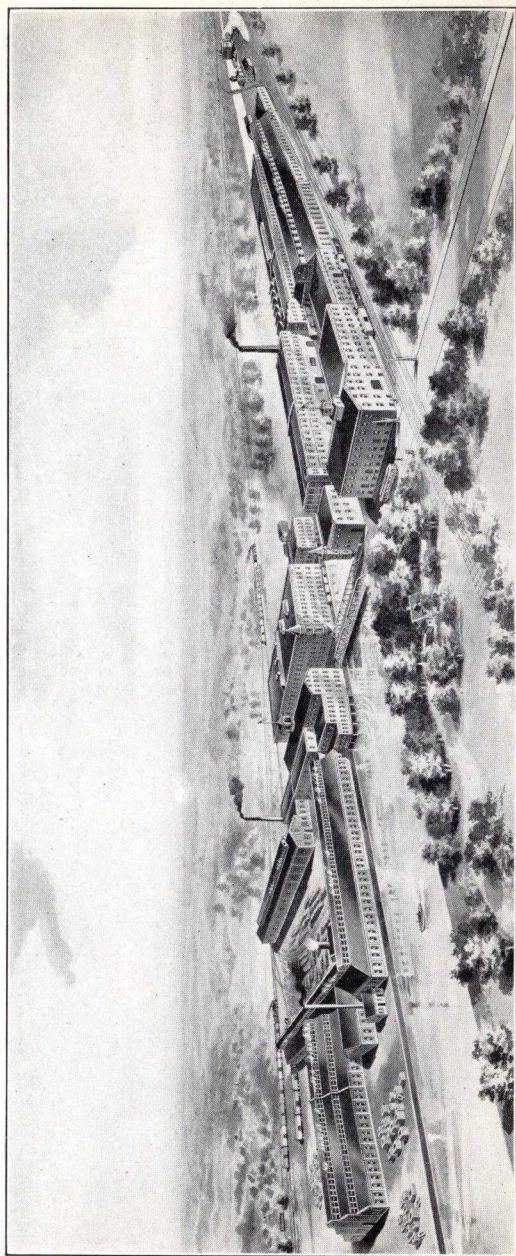


ILLINOIS
IRON &
BOLT CO

CARPENTERSVILLE
ILLINOIS

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CARPENTERSVILLE
ILLINOIS





PLANT OF ILLINOIS IRON & BOLT CO. AT CARPENTERSVILLE, ILL.

ILLINOIS IRON & BOLT CO.

MANUFACTURERS OF

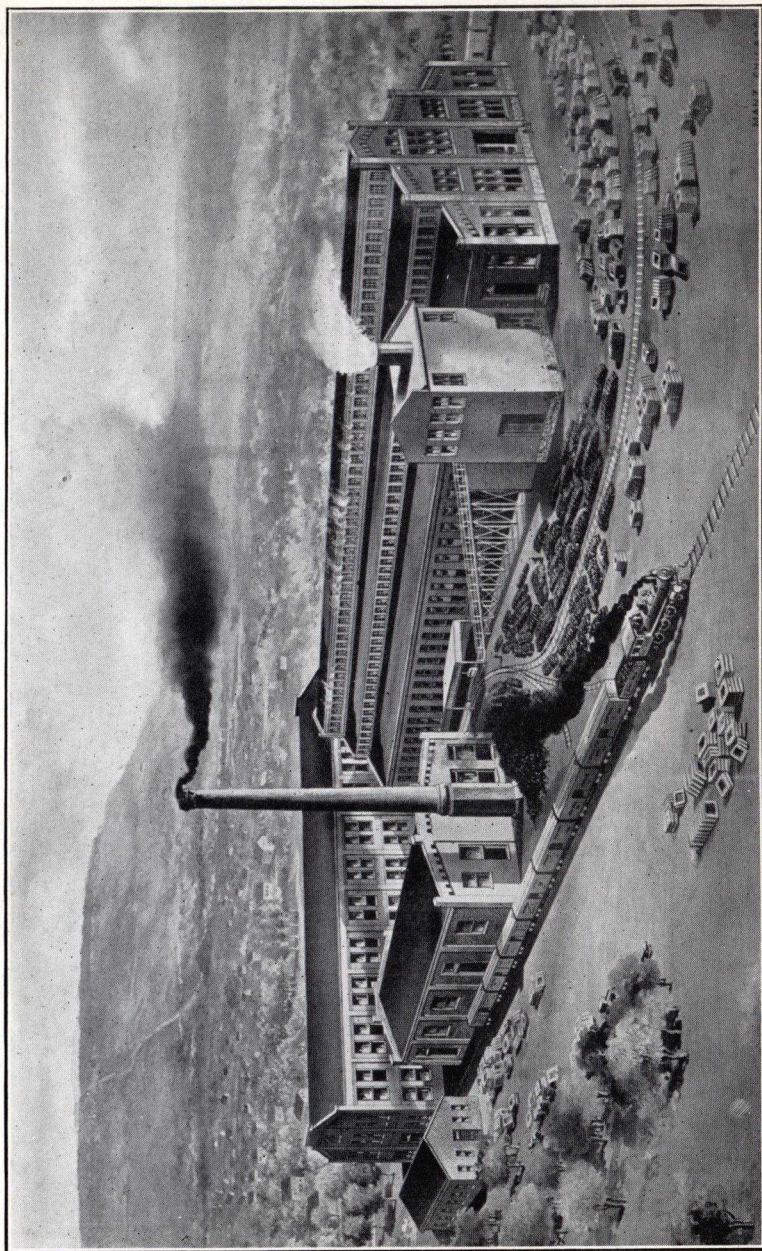
Cast and Steel Wagon Skeins; Steel Axles
for Trailers, Buggies, Carriages and
Wagons; Blacksmiths' Tools; Vises,
Anvils; Jack Screws. : : : : :

Steel Warehouse Trucks; Hydraulic
Presses; Tailors' Geese; Sad Irons;
Copying Presses. : : : : :



CARPENTERSVILLE, ILLINOIS

CATALOGUE No. 51



BRANCH WORKS AT CHATTANOOGA, TENN.

TO THE TRADE

With this issue we submit for your attention the Superior Quality of our Cast Iron and Steel Wagon Skeins, Steel Axles and other articles of our manufacture.

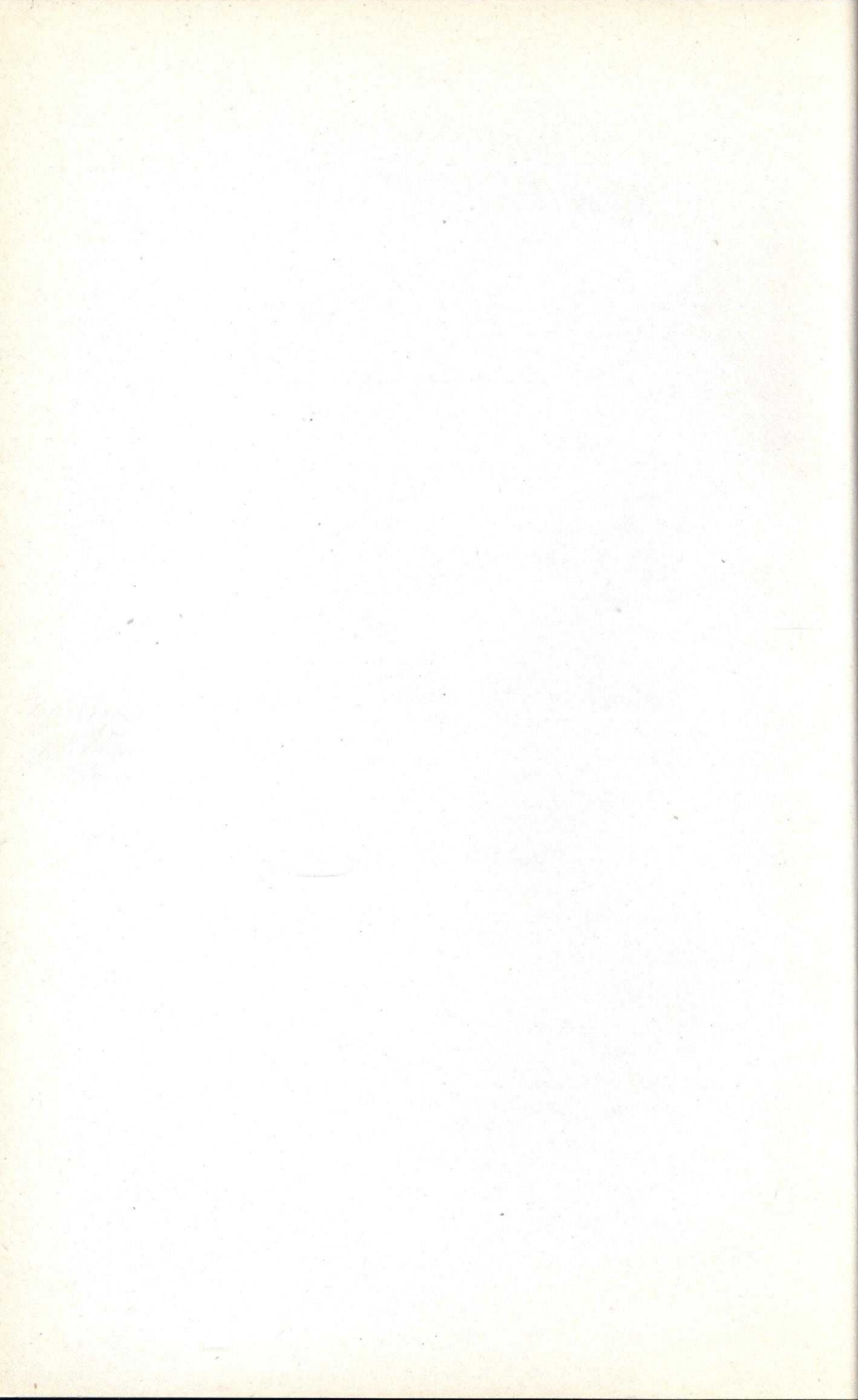
Attention is invited to descriptions on following pages showing special features found in Illinois Iron & Bolt Co.'s Skeins and other products.

We are the Oldest and Largest Skein Manufacturers in the World. Our experience during the past sixty years has made us experts in this particular line which we can prove by our results. Only high grade iron and steel, tested in our own laboratories, is used in all articles, and experienced workmen do the rest.

Every customer is assured perfect satisfaction.

Inquiries for prices and terms and your patronage respectfully solicited.

ILLINOIS IRON & BOLT CO.



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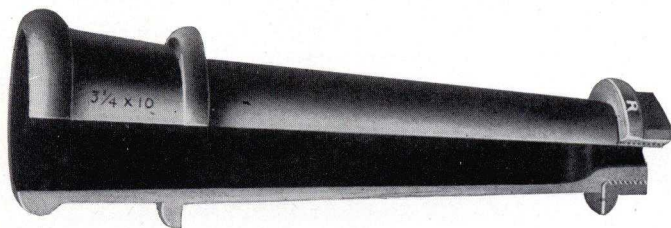
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ILLINOIS IRON & BOLT CO.

Superior Cast Iron Wagon Skeins

D. V. & CO.
BRAND

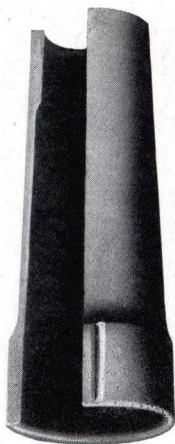


1. The basis of our castings is Lake Superior Charcoal Iron. The mixture is established by chemical analysis in our own laboratories to insure greatest strength and wearing qualities. Not a particle of scrap iron is used in our skeins and other castings.

2. The distribution of metal in our skeins, as above cut shows, is thickest at the shoulder, where strength is required, and tapers from shoulder to point. At the top of spindle, metal is evenly distributed, giving economy in weight where not required. This valuable feature found only in our patterns.

3. Another special feature of our skeins is the length of the threaded plug at end of spindle and the depth of the nut. This not alone insures strength but all trouble of losing nuts is eliminated.

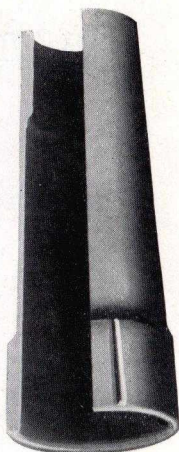
4. These skeins and boxes are cast in such a manner as to make them perfectly seamless, which insures a nice round, smooth surface throughout.



Wedge in Box

Superior Cast Iron Wagon Skeins

D. V. & CO.
BRAND



Press in Box

The distribution of metal in the boxes is along the same lines as in skeins and insures the best possible results.

Unless otherwise ordered we always send boxes to be wedged into the hubs, but when so ordered we will furnish boxes to be pressed into hubs without extra charge.

New Price List of D. V. & Co. Cast Skeins and Boxes

REVISED MAY 1, 1920

SIZE	PER SET	SIZE	PER SET	SIZE	PER SET
$2\frac{1}{8}$ x $6\frac{1}{2}$ in.	\$ 9.00	$2\frac{3}{4}$ x 9 in.	\$13.20	$3\frac{1}{2}$ x 12 in.	\$21.00
$2\frac{1}{4}$ x 7 "	9.40	3 x $8\frac{1}{2}$ "	14.00	$3\frac{3}{4}$ x 11 "	21.60
$2\frac{1}{4}$ x $7\frac{1}{2}$ "	9.80	3 x 9 "	14.00	$3\frac{3}{4}$ x 12 "	22.00
$2\frac{3}{8}$ x 7 "	10.00	$3\frac{1}{4}$ x 9 "	15.60	4 x 12 "	25.00
$2\frac{3}{8}$ x $7\frac{1}{2}$ "	10.00	3 x 10 "	15.00	$4\frac{1}{4}$ x 12 "	32.00
$2\frac{1}{2}$ x 7 "	10.60	$3\frac{1}{4}$ x 10 "	17.00	$4\frac{1}{2}$ x 12 "	38.00
$2\frac{1}{2}$ x $7\frac{1}{2}$ "	11.00	$3\frac{1}{4}$ x 11 "	17.60	$4\frac{1}{2}$ x 13 "	44.00
$2\frac{1}{2}$ x 8 "	11.40	$3\frac{1}{2}$ x 10 "	17.80	5 x 14 "	52.00
$2\frac{3}{4}$ x 8 "	12.40	$3\frac{1}{2}$ x $10\frac{1}{2}$ "	19.00		
$2\frac{3}{4}$ x $8\frac{1}{2}$ "	13.00	$3\frac{1}{2}$ x 11 "	20.00		

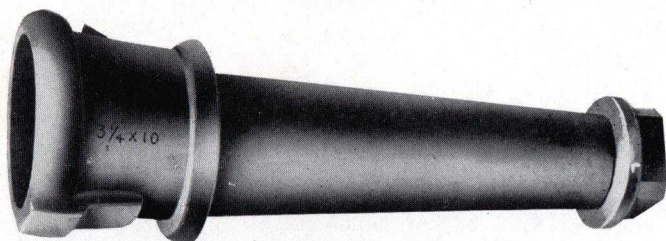
Discount

Orput draft lugs, as shown on Special Skein No. 150c. per set net, extra.

Superior Cast Iron Wagon Skeins

ANDERSON LEADER

BRAND



These skeins and boxes are built upon exactly the same lines as our D. V. & Co. pattern and will interchange perfectly with them for corresponding sizes.

What is said about boxes and nuts for D. V. & Co. brand applies to the Anderson Leader pattern also.

New Price List of Anderson Leader Skeins and Boxes

REVISED MAY 1, 1920

SIZE	PER SET	SIZE	PER SET	SIZE	PER SET
2 $\frac{1}{8}$ x 6 $\frac{1}{2}$ in.	\$ 9.00	2 $\frac{3}{4}$ x 9 in.	\$13.20	3 $\frac{1}{2}$ x 12 in.	\$21.00
2 $\frac{1}{4}$ x 7 "	9.40	3 x 8 $\frac{1}{2}$ "	14.00	3 $\frac{3}{4}$ x 11 "	21.60
2 $\frac{1}{4}$ x 7 $\frac{1}{2}$ "	9.80	3 x 9 "	14.00	3 $\frac{3}{4}$ x 12 "	22.00
2 $\frac{3}{8}$ x 7 "	10.00	3 $\frac{1}{4}$ x 9 "	15.60	4 x 12 "	25.00
2 $\frac{3}{8}$ x 7 $\frac{1}{2}$ "	10.00	3 x 10 "	15.00	4 $\frac{1}{4}$ x 12 "	32.00
2 $\frac{1}{2}$ x 7 "	10.60	3 $\frac{1}{4}$ x 10 "	17.00	4 $\frac{1}{2}$ x 12 "	38.00
2 $\frac{1}{2}$ x 7 $\frac{1}{2}$ "	11.00	3 $\frac{1}{4}$ x 11 "	17.60	4 $\frac{1}{2}$ x 13 "	44.00
2 $\frac{1}{2}$ x 8 "	11.40	3 $\frac{1}{2}$ x 10 "	17.80	5 x 14 "	52.00
2 $\frac{3}{4}$ x 8 "	12.40	3 $\frac{1}{2}$ x 10 $\frac{1}{2}$ "	19.00		
2 $\frac{3}{4}$ x 8 $\frac{1}{2}$ "	13.00	3 $\frac{1}{2}$ x 11 "	20.00		

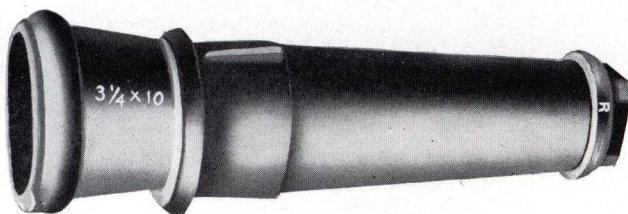
Discount.....

Orput draft lugs, as shown on Special Skein No. 1.....50c. per set net, extra.

Superior Cast Iron Wagon Skeins

I. I. & B.

BRAND



This is one of our old, reliable brands used for years and preferred by many wagon builders.

The boxes are always of the wedge in type.

New Price List of I. I. & B. Skeins and Boxes

REVISED MAY 1, 1920

SIZE	PER SET	SIZE	PER SET	SIZE	PER SET
2 1/4 x 7 in.	\$ 9.40	2 3/4 x 9 in.	\$13.20	3 1/2 x 10 1/2 in.	\$19.00
2 1/4 x 7 1/2 "	9.80	3 x 9 "	14.00	3 1/2 x 11 "	20.00
2 3/8 x 7 1/2 "	10.00	3 1/4 x 9 "	15.60	3 1/2 x 12 "	21.00
2 1/2 x 7 1/2 "	11.00	3 x 10 "	15.00	3 3/4 x 11 "	21.60
2 1/2 x 8 "	11.40	3 1/4 x 10 "	17.00	3 3/4 x 12 "	22.00
2 3/4 x 8 "	12.40	3 1/4 x 11 "	17.60	4 1/2 x 12 "	38.00
2 3/4 x 8 1/2 "	13.00	3 1/2 x 10 "	17.80		

Discount.....

Superior Cast Iron Wagon Skeins

BROWN'S TRUSS



This skein has chambered arm or spindle creating an oil chamber between two bearings, which by many is considered a desirable feature.

It also has an excellent arrangement for trussing the axle from skein to skein, and for clipping the bell or mouth of the skein and attaching a brace or stay chain hook.

These features, together with added thickness of metal where special strength is required make it a very desirable, convenient and durable skein.

These skeins are furnished with boxes made to wedge into the hub unless otherwise ordered.

Press in boxes will be furnished, when skeins are so ordered, without extra cost.

The boxes and nuts on these skeins interchange with those furnished on our regular D. V. & Co. brand. This will be found a great convenience by wagon makers who use both kinds.

New Price List of Brown's Truss Cast Skeins and Boxes

REVISED MAY 1, 1920

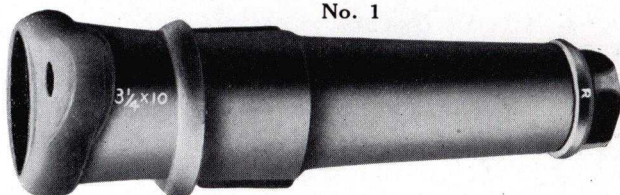
SIZE	PER SET	SIZE	PER SET
2 $\frac{3}{8}$ x 7 inches	\$10.00	3 $\frac{1}{4}$ x 9 inches	\$15.60
2 $\frac{1}{2}$ x 7 $\frac{1}{2}$ "	11.00	3 $\frac{1}{4}$ x 10 "	17.00
2 $\frac{1}{2}$ x 8 "	11.40	3 $\frac{1}{2}$ x 10 "	17.80
2 $\frac{3}{4}$ x 8 "	12.40	3 $\frac{1}{2}$ x 11 "	20.00
2 $\frac{3}{4}$ x 8 $\frac{1}{2}$ "	13.00	3 $\frac{1}{2}$ x 12 "	21.00
2 $\frac{3}{4}$ x 9 "	13.20	3 $\frac{3}{4}$ x 11 "	21.60
3 x 9 "	14.00	3 $\frac{3}{4}$ x 12 "	22.00
3 x 10 "	15.00	4 x 12 "	25.00

Discount.....

Superior Cast Iron Wagon Skeins

SPECIAL PATTERN—EXTRA HEAVY

No. 1



This skein has the Orput Patent Lug used on front axles for attaching draft or stay chains.

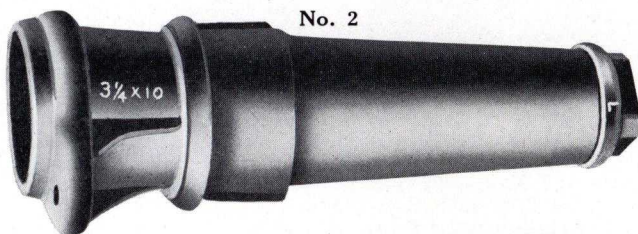
The boxes of this skein are made to wedge in.

New Price List of No. 1 Cast Skeins and Boxes

REVISED MAY 1, 1920

SIZE	PER SET	SIZE	PER SET
2 1/2 x 8 inches	\$11.40	3 1/2 x 11 inches	\$20.00
2 3/4 x 8 "	12.40	3 3/4 x 12 "	22.00
3 x 9 "	14.00	4 x 12 "	25.00
3 1/4 x 10 "	17.00		

No. 2



No. 2 Skein has a lug underneath which is intended to receive a round truss rod.

The boxes are made to wedge in.

New Price List of No. 2 Cast Skeins and Boxes

REVISED MAY 1, 1920

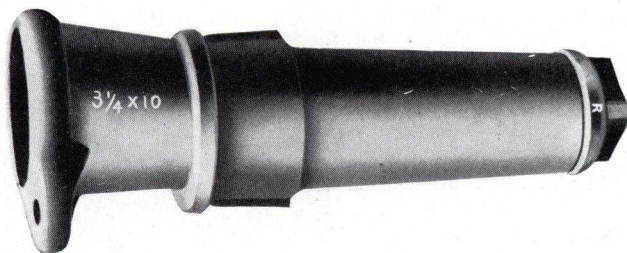
SIZE	PER SET	SIZE	PER SET
2 1/2 x 7 1/2 inches	\$11.00	3 1/4 x 10 inches	\$17.00
2 3/4 x 8 "	12.40	3 1/2 x 11 "	20.00
2 3/4 x 8 1/2 "	13.00	3 3/4 x 12 "	22.00
3 x 9 "	14.00	4 x 12 "	25.00
3 x 10 "	15.00		

Discount

Superior Cast Iron Wagon Skeins

SPECIAL PATTERN—EXTRA HEAVY

No. 3



No. 3 Skein has another style of lug for attaching truss rod.
The boxes are made to wedge in.

New Price List of No. 3 Cast Skeins and Boxes

REVISED MAY 1, 1920

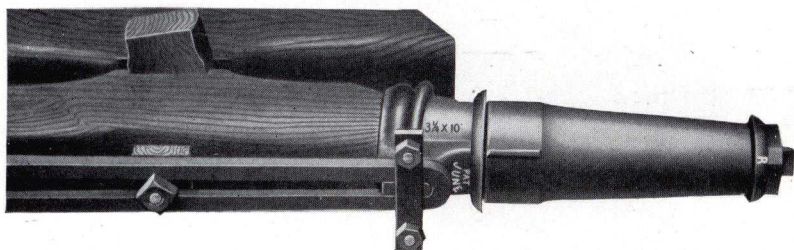
SIZE	PER SET	SIZE	PER SET
2½ x 7½ inches	\$11.00	3¼ x 10 inches	\$17.00
2¾ x 8½ "	13.00	3½ x 11 "	20.00
3 x 9 "	14.00		

Discount.....

Superior Cast Iron Wagon Skeins

SPECIAL PATTERN—EXTRA HEAVY

No. 4



No. 4 Skein has the Ulrich patent truss attachment.

The boxes are made to wedge in.

New Price List of No. 4 Cast Skeins and Boxes

REVISED MAY 1, 1920

SIZE	PER SET	SIZE	PER SET	SIZE	PER SET
2 $\frac{1}{4}$ x 7 in.	\$ 9.40	3 x 9 in.	\$14.00	3 $\frac{1}{2}$ x 12 in.	\$21.00
2 $\frac{1}{4}$ x 7 $\frac{1}{2}$ "	9.80	3 $\frac{1}{4}$ x 9 "	15.60	3 $\frac{3}{4}$ x 11 "	21.60
2 $\frac{3}{8}$ x 7 $\frac{1}{2}$ "	10.00	3 x 10 "	15.00	3 $\frac{3}{4}$ x 12 "	22.00
2 $\frac{1}{2}$ x 7 $\frac{1}{2}$ "	11.00	3 $\frac{1}{4}$ x 10 "	17.00	4 x 12 "	25.00
2 $\frac{1}{2}$ x 8 "	11.40	3 $\frac{1}{4}$ x 11 "	17.60	4 $\frac{1}{4}$ x 12 "	32.00
2 $\frac{3}{4}$ x 8 "	12.40	3 $\frac{1}{2}$ x 10 "	17.80	4 $\frac{1}{2}$ x 12 "	38.00
2 $\frac{3}{4}$ x 8 $\frac{1}{2}$ "	13.00	3 $\frac{1}{2}$ x 10 $\frac{1}{2}$ "	19.00	4 $\frac{1}{2}$ x 13 "	44.00
2 $\frac{3}{4}$ x 9 "	13.20	3 $\frac{1}{2}$ x 11 "	20.00	5 x 14 "	52.00

Discount.....

Superior Cast Iron Wagon Skeins

SPECIAL PATTERN—EXTRA HEAVY

No. 5 Heffley's Patent

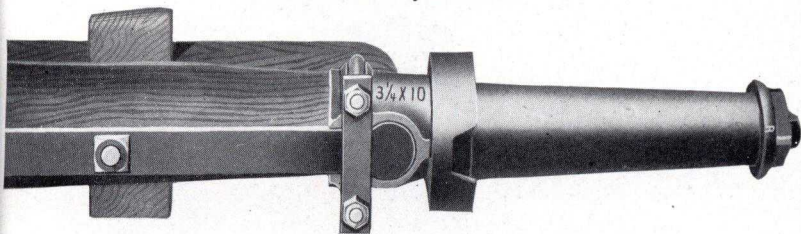


Fig. 4.

These Skeins are made with two collars, a low one to take the thrust of the hub and a higher one upon which the outer wrought iron sand band is shrunk.

Fig. 1 shows the skein with double collar but without sand bands.



Fig. 2.

Fig. 2 shows the inner sand band made of malleable iron and provided with prongs to be driven into the hub.

Fig. 3 shows a hub with the malleable iron sand band in position.



Fig. 3.



Fig. 1.

Fig. 4 shows the outer or wrought iron sand band in position with a square opening at bottom for sand and dirt to drop out. It also shows the style of truss used in connection with this skein and the clip tie which holds the end of truss rod in position and reinforces the skein. A stay chain hook can readily be added to the clip tie plate.

Superior Cast Iron Wagon Skeins

SPECIAL PATTERN—EXTRA HEAVY

No. 5 Heffley's Patent



Fig. 5.

Fig. 5 shows box to be wedged into hubs. Press in boxes furnished only when specified.

These arrangements make the "Heffley" patent skein one of the best because it excludes sand and dirt and reinforces the axles with a substantial truss.

New Price List No. 5 Heffley Cast Skeins and Boxes

REVISED MAY 1, 1920

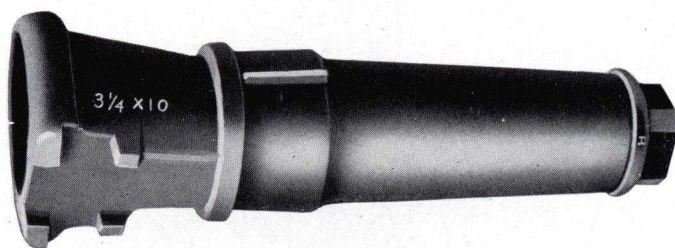
SIZE	With Malleable Bands only	Complete with Malleable and Wrought Bands
	PER SET	PER SET
2 $\frac{1}{8}$ x 6 $\frac{1}{2}$ inches	\$10.00	\$11.50
2 $\frac{1}{4}$ x 7 "	10.40	11.90
2 $\frac{1}{2}$ x 8 "	12.40	13.90
2 $\frac{3}{4}$ x 9 "	14.20	15.70
3 x 9 "	15.50	17.00
3 $\frac{1}{4}$ x 10 "	18.50	20.00
3 $\frac{1}{2}$ x 11 "	21.75	23.25

Discount.....

Superior Cast Iron Wagon Skeins

SPECIAL PATTERN—EXTRA HEAVY

No. 6



No. 6 Skein is made to receive clip and truss bar. The clip bar is intended to be welded to the truss bar in the form of a "T".

Boxes can be furnished either to press in or wedge in. Press in boxes are furnished unless wedge in are ordered.

New Price List of No. 6 Cast Skeins and Boxes

REVISED MAY 1, 1920

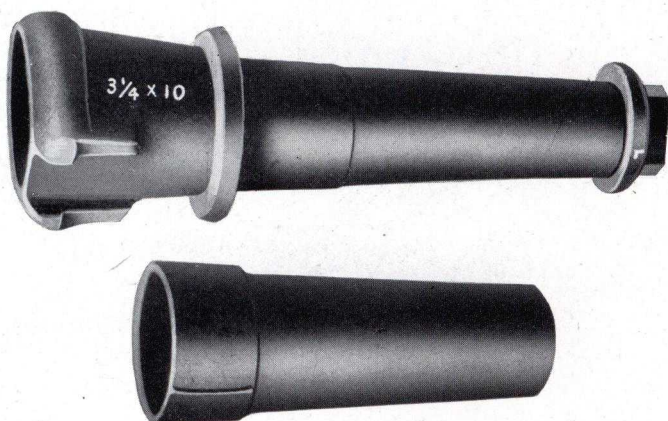
SIZE	PER SET	SIZE	PER SET	SIZE	PER SET
2 1/4 x 7 1/2 in.	\$ 9.80	3 x 9 in.	\$14.00	3 1/2 x 11 in.	\$20.00
2 1/2 x 8 "	11.40	3 x 10 "	15.00	3 3/4 x 11 "	21.60
2 3/4 x 8 "	12.40	3 1/4 x 10 "	17.00	3 3/4 x 12 "	22.00
2 3/4 x 8 1/2 "	13.00	3 1/2 x 10 "	17.80	4 x 12 "	25.00

Discount

Superior Cast Iron Wagon Skeins

SPECIAL PATTERN—EXTRA HEAVY

New No. 7



New No. 7 shows a skein with re-inforcement at the shoulder, placing double strength at the very point where the strain of a load is centered, making breakages impossible.

The box is made to match.

This skein is also arranged to receive a truss and a clip for stay chain hooks or braces. A most desirable skein.

The boxes are made for pressing into hubs.

New Price List of No. 7 Cast Skeins and Boxes

REVISED MAY 1, 1920

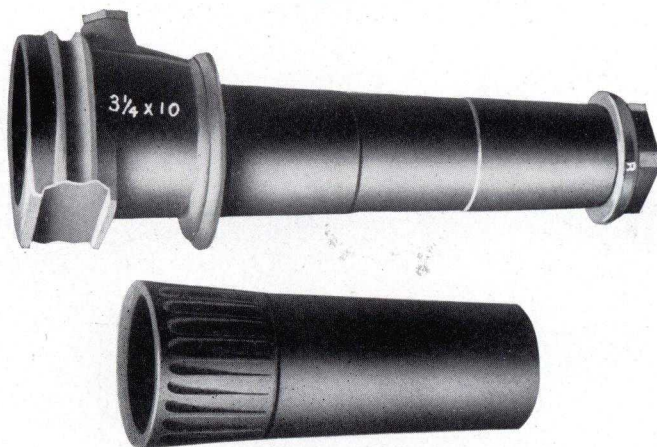
SIZE	PER SET	SIZE	PER SET
2 1/4 x 7 1/2 inches	\$ 9.80	3 x 9 inches	\$14.00
2 1/2 x 8 "	11.40	3 1/4 x 10 "	17.00
2 3/4 x 8 1/2 "	13.00	3 1/2 x 11 "	20.00

Discount.....

Superior Cast Iron Wagon Skeins

SPECIAL PATTERN—EXTRA HEAVY

No. 8



No. 8 shows an oiler skein with chambered arm and a fluted box to press in, also device for clipping.

Will furnish without oilers unless otherwise ordered.

New Price List of No. 8 Cast Skeins and Boxes

REVISED MAY 1, 1920

SIZE	PER SET	SIZE	PER SET
2 1/4 x 7 1/2 inches	\$ 9.80	3 1/4 x 10 inches	\$17.00
2 1/2 x 8 "	11.40	3 1/2 x 11 "	20.00
2 3/4 x 8 "	12.40	3 3/4 x 11 "	21.60
2 3/4 x 8 1/2 "	13.00	3 3/4 x 12 "	22.00
3 x 9 "	14.00	4 x 12 "	25.00

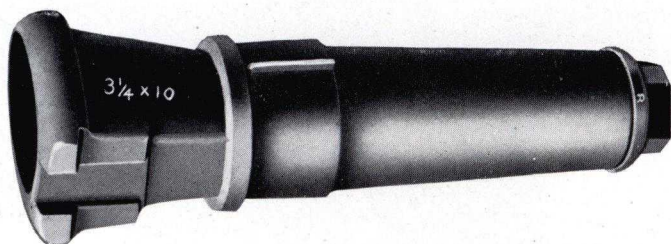
When ordered with oilers, 50c. per set net, extra.

Discount.....

Superior Cast Iron Wagon Skeins

SPECIAL PATTERN—EXTRA HEAVY

No. 9



No. 9 Skein is made to receive clip and truss bar. The ends of truss bar to be bent down back of the clip bar. No welding is required.

Boxes can be had to press in or wedge in as preferred.

Press in boxes are furnished unless otherwise ordered.

New Price List of No. 9 Cast Skeins and Boxes

REVISED MAY 1, 1920

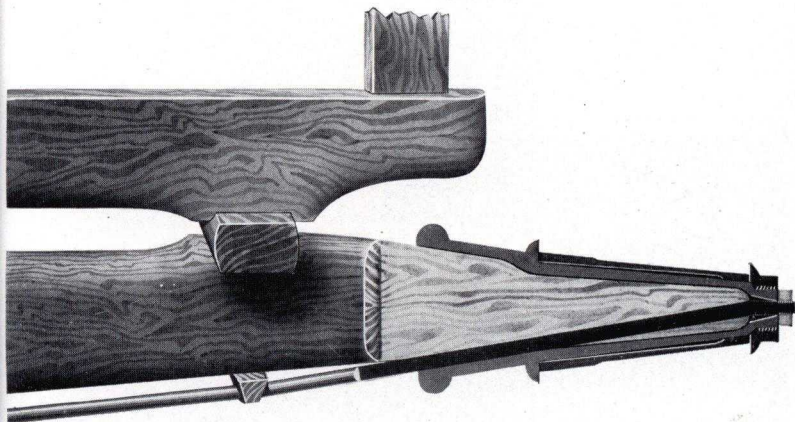
SIZE	PER SET	SIZE	PER SET	SIZE	PER SET
$2\frac{1}{8}$ x $6\frac{1}{2}$ in.	\$ 9.00	3 x 9 in.	\$14.00	$3\frac{3}{4}$ x 11 in.	\$21.60
$2\frac{1}{4}$ x 7 "	9.80	$3\frac{1}{4}$ x 9 "	15.60	$3\frac{3}{4}$ x 12 "	22.00
$2\frac{1}{2}$ x 8 "	11.40	3 x 10 "	15.00	4 x 12 "	25.00
$2\frac{3}{4}$ x 8 "	12.40	$3\frac{1}{4}$ x 10 "	17.00	$4\frac{1}{4}$ x 12 "	32.00
$2\frac{3}{4}$ x $8\frac{1}{2}$ "	13.00	$3\frac{1}{2}$ x 11 "	20.00	$4\frac{1}{2}$ x 12 "	38.00

Discount.....

Superior Cast Iron Wagon Skeins

SPECIAL PATTERN—EXTRA HEAVY

No. 10



No. 10 is a skein to be used in connection with a round truss rod passing through the skeins and drawn up by a nut at each end. This forms a very strong and rigid truss for the axle. Requires no skein bolts.

Boxes are made to wedge in or press in, the wedge in style will be furnished unless press in boxes are ordered.

New Price List of No. 10 Cast Skeins and Boxes

REVISED MAY 1, 1920

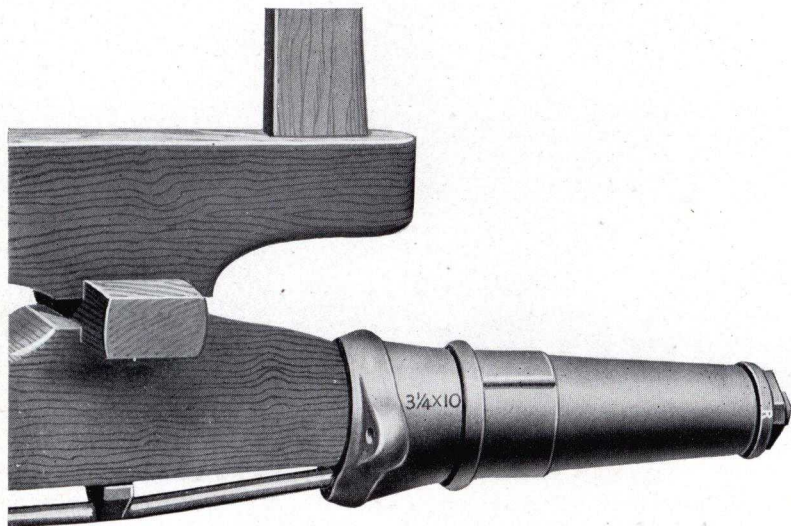
SIZE	PER SET	SIZE	PER SET
2½ x 8 inches	\$11.40	3½ x 11 inches	\$20.00
2¾ x 8 "	12.40	3¾ x 11 "	21.60
3 x 9 "	14.00	3¾ x 12 "	22.00
3¼ x 10 "	17.00	4 x 12 "	25.00
3½ x 10 "	17.80		

Discount.....

Superior Cast Iron Wagon Skeins

SPECIAL PATTERN—EXTRA HEAVY

No. 11



No. 11 Skein is the same as No. 10, except that it is provided with a lug on front side for attaching stay chain or brace.

The boxes for Nos. 10 and 11 skeins are interchangeable.

New Price List of No. 11 Cast Skeins and Boxes

REVISED MAY 1, 1920

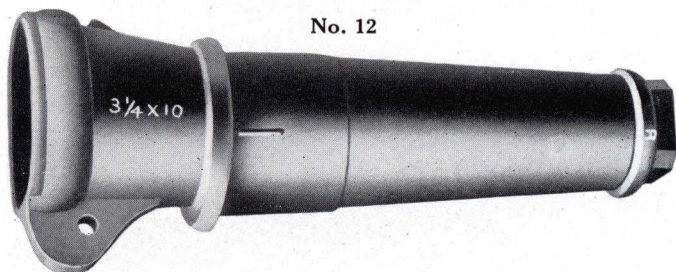
SIZE	PER SET	SIZE	PER SET
2½ x 8 inches	\$11.40	3½ x 11 inches	\$20.00
2¾ x 8 "	12.40	3¾ x 11 "	21.60
3 x 9 "	14.00	3¾ x 12 "	22.00
3¼ x 10 "	17.00	4 x 12 "	25.00
3½ x 10 "	17.80		

Discount.....

Superior Cast Iron Wagon Skeins

SPECIAL PATTERN—EXTRA HEAVY

No. 12



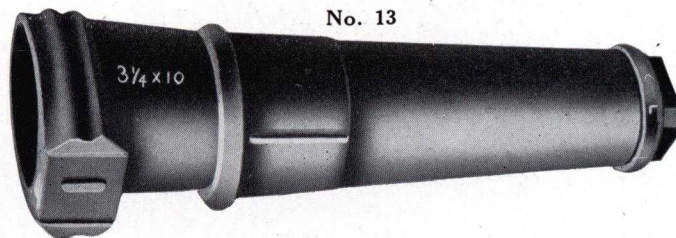
No. 12 Skein is for use on front axle provided with a lug underneath the bell for attaching brace or stay chain. The skeins for hind axles are made without the lug. The boxes are made to be pressed into the hubs.

New Price List of No. 12 Cast Skeins and Boxes

REVISED MAY 1, 1920

SIZE	PER SET	SIZE	PER SET
2 1/2 x 8 inches	\$11.40	3 1/4 x 10 inches	\$17.00
2 3/4 x 8 "	12.40	3 1/2 x 11 "	20.00
3 x 9 "	14.00	3 3/4 x 11 "	21.60

No. 13



No. 13 Skein has a clip and truss bar with an oil cup. The small oblong lug underneath the skein is intended to fit into holes punched in each end of truss bar. The clip bar is then placed in position and the whole held in place by nuts applied to the ends of the clip.

The boxes are made to wedge in unless otherwise ordered.

New Price List of No. 13 Cast Skeins and Boxes

REVISED MAY 1, 1920

SIZE	PER SET	SIZE	PER SET
2 1/2 x 8 inches	\$11.40	3 1/2 x 10 inches	\$17.80
2 3/4 x 8 1/2 "	13.00	3 1/2 x 11 "	20.00
3 x 9 "	14.00	3 3/4 x 12 "	22.00
3 1/4 x 10 "	17.00	4 x 12 "	25.00

Discount

Superior Cast Iron Wagon Skeins

SPECIAL PATTERN—EXTRA HEAVY

No. 14



No. 14 Skein has bearings nearly parallel. This style is considered superior by many users of wagons. The skein is also arranged for clipping.

Skeins furnished without oilers unless otherwise ordered.

Boxes furnished to press in.

New Price List of No. 14 Cast Skeins and Boxes

REVISED MAY 1, 1920

SIZE	PER SET
3 x 9 inches	\$14.00
3 1/4 x 10 "	17.00
3 1/2 x 11 "	20.00

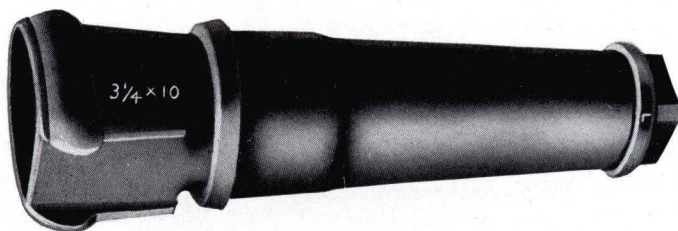
When ordered with oilers 50c. per set net, extra.

Discount.....

Superior Cast Iron Wagon Skeins

SPECIAL PATTERN—EXTRA HEAVY

No. 21



No. 21 Skein is made to receive clip and truss bar. The ends of truss bar to be bent down back of clip bar. No welding is required.

The boxes are made to press in and wedge in.

Press in boxes will be furnished unless otherwise ordered.

New Price List of No. 21 Cast Skeins and Boxes

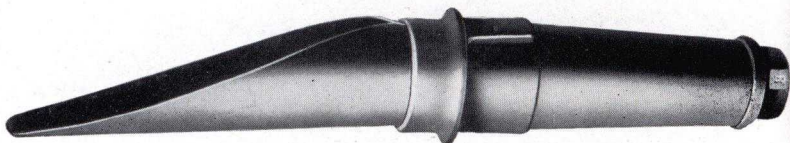
REVISED MAY 1, 1920

SIZE	PER SET	SIZE	PER SET
2 1/8 x 6 1/2 inches	\$9.00	3 x 9 inches	\$14.00
2 3/8 x 7 "	10.00	3 1/4 x 10 "	17.00
2 3/8 x 7 1/2 "	10.00	3 1/2 x 11 "	20.00
2 1/2 x 8 "	11.40	3 3/4 x 12 "	22.00
2 3/4 x 8 "	12.40	4 x 12 "	25.00
2 3/4 x 8 1/2 "	13.00		

Discount.....

Wrought Steel Wagon Skeins

STANDARD PATTERN



This skein is made of one piece, best grade skein steel and the workmanship is first class.

It is thoroughly welded, smooth and uniform in size.

The collar is made of wrought iron thoroughly welded, shrunk on and riveted to the skein and will not turn on spindle.

The threaded plug at point is made of wrought iron thoroughly welded to the spindle, with deep cut threads.

Oil fuel is used throughout in the manufacture of our steel skeins. This does not injure the material like coke, but produces a smooth finish.

Boxes to wedge in will be furnished unless orders call for the press in style.

New Price List of Standard Steel Skeins and Boxes

REVISED OCTOBER 15, 1919

SIZE	PER SET	GAUGE	SIZE	PER SET	GAUGE
2 1/4 x 7 in.	\$13.75	No. 11	3 1/4 x 11 in.	\$19.00	No. 9
2 1/4 x 7 1/2 "	13.90	" 11	3 1/2 x 10 "	20.50	" 9
2 1/2 x 7 1/2 "	14.00	" 11	3 1/2 x 10 1/2 "	20.75	" 9
2 1/2 x 8 "	14.25	" 11	3 1/2 x 11 "	21.00	" 9
2 3/4 x 8 "	14.75	" 10	3 1/2 x 12 "	23.00	" 9
2 3/4 x 8 1/2 "	15.00	" 10	3 3/4 x 11 "	24.75	" 8
2 3/4 x 9 "	15.25	" 10	3 3/4 x 12 "	25.00	" 8
3 x 9 "	16.00	" 10	4 x 12 "	29.00	" 7
3 x 10 "	17.50	" 10	4 1/4 x 12 "	33.75	" 7
3 1/4 x 9 "	18.00	" 9	4 1/2 x 12 "	41.50	" 6
3 1/4 x 10 "	18.50	" 9	4 1/2 x 13 "	43.50	" 6

Discount

Wrought Steel Wagon Skeins

COLUMBUS PATTERN



This skein is made of the best grade skein steel and the workmanship is first class.

It is thoroughly welded, smooth and uniform in size.

The collar is made of wrought iron, thoroughly welded and shrunk on the skein.

The threaded plug at point is made of wrought iron and securely welded to the spindle.

Oil fuel is used throughout in the manufacture of our steel skeins. This does not injure the material like coke, but produces a smooth finish.

The boxes on these skeins are made to be wedged in the hubs.

New Price List of Columbus Steel Skeins and Boxes

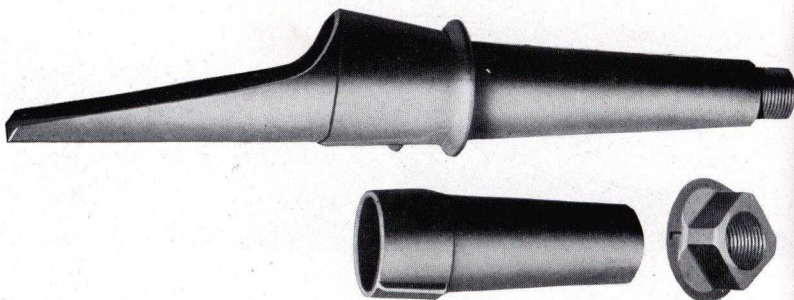
REVISED OCTOBER 15, 1919

SIZE	PER SET	GAUGE	SIZE	PER SET	GAUGE
2 $\frac{1}{4}$ x 7 in.	\$13.75	No. 11	3 $\frac{1}{4}$ x 11 in.	\$19.00	No. 9
2 $\frac{1}{4}$ x 7 $\frac{1}{2}$ "	13.90	" 11	3 $\frac{1}{2}$ x 10 "	20.50	" 9
2 $\frac{1}{2}$ x 7 $\frac{1}{2}$ "	14.00	" 11	3 $\frac{1}{2}$ x 10 $\frac{1}{2}$ "	20.75	" 9
2 $\frac{1}{2}$ x 8 "	14.25	" 11	3 $\frac{1}{2}$ x 11 "	21.00	" 9
2 $\frac{3}{4}$ x 8 "	14.75	" 10	3 $\frac{1}{2}$ x 12 "	23.00	" 9
2 $\frac{3}{4}$ x 8 $\frac{1}{2}$ "	15.00	" 10	3 $\frac{3}{4}$ x 11 "	24.75	" 8
2 $\frac{3}{4}$ x 9 "	15.25	" 10	3 $\frac{3}{4}$ x 12 "	25.00	" 8
3 x 9 "	16.00	" 10	4 x 12 "	29.00	" 7
3 x 10 "	17.50	" 10	4 $\frac{1}{4}$ x 12 "	33.75	" 7
3 $\frac{1}{4}$ x 9 "	18.00	" 9	4 $\frac{1}{2}$ x 12 "	41.50	" 6
3 $\frac{1}{4}$ x 10 "	18.50	" 9	4 $\frac{1}{2}$ x 13 "	43.50	" 6

Discount.....

Wrought Steel Wagon Skeins

WESTERN PATTERN



The entire length of this skein is one piece, extra heavy, skein steel, thoroughly welded.

The combined collar and sleeve is made of one piece steel and welded at the bottom, leaving sides and top perfectly smooth; this feature gives added strength at the shoulder.

The threaded plug at point is made of wrought iron thoroughly welded to the skein and has deep cut threads.

The spindles are smooth and uniform.

The boxes fit closely all around.

With the aid of our improved machinery and skilled labor we guarantee our steel skeins to be first class.

Boxes to be wedged in will be furnished unless orders call for the press in style.

New Price List of Western Skeins and Boxes

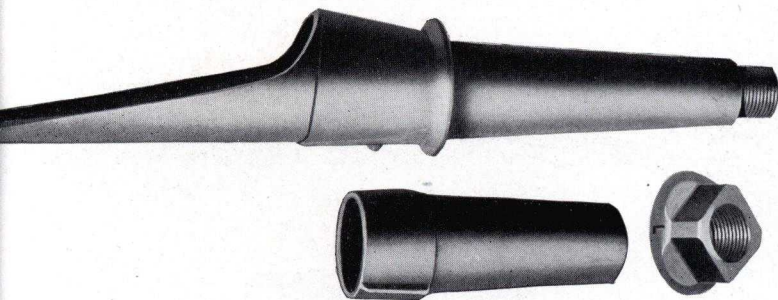
REVISED OCTOBER 15, 1919

SIZE	PER SET	GAUGE	SIZE	PER SET	GAUGE
2 1/4 x 7 in.	\$13.75	No. 11	3 1/2 x 10 in.	\$20.50	No. 9
2 1/4 x 7 1/2 "	13.90	" 11	3 1/2 x 10 1/2 "	20.75	" 9
2 1/2 x 7 1/2 "	14.00	" 11	3 1/2 x 11 "	21.00	" 9
2 1/2 x 8 "	14.25	" 11	3 1/2 x 12 "	23.00	" 9
2 3/4 x 8 "	14.75	" 10	3 3/4 x 11 "	24.75	" 8
2 3/4 x 8 1/2 "	15.00	" 10	3 3/4 x 12 "	25.00	" 8
2 3/4 x 9 "	15.25	" 10	4 x 12 "	29.00	" 7
3 x 9 "	16.00	" 10	4 1/4 x 12 "	33.75	" 7
3 x 10 "	17.50	" 10	4 1/2 x 12 "	41.50	" 6
3 1/4 x 9 "	18.00	" 9	4 1/2 x 13 "	43.50	" 6
3 1/4 x 10 "	18.50	" 9	5 x 14 "	55.75	" 5
3 1/4 x 11 "	19.00	" 9			

Discount

Wrought Steel Wagon Skeins

SANDAGE PATTERN



The entire length of this skein is one piece, extra heavy, skein steel, thoroughly welded.

The combined collar and sleeve is made of one piece steel and welded at the bottom, leaving sides and top perfectly smooth. This feature gives added strength at the shoulder.

The threaded plug at point of spindle is made of wrought iron, thoroughly welded to the skein.

The spindles are smooth and uniform.

The boxes fit closely all around.

With improved machinery and skilled labor our skeins are superior to any other make.

The boxes on these skeins are made to be wedged in the hubs.

New Price List of Sandage Steel Skeins and Boxes

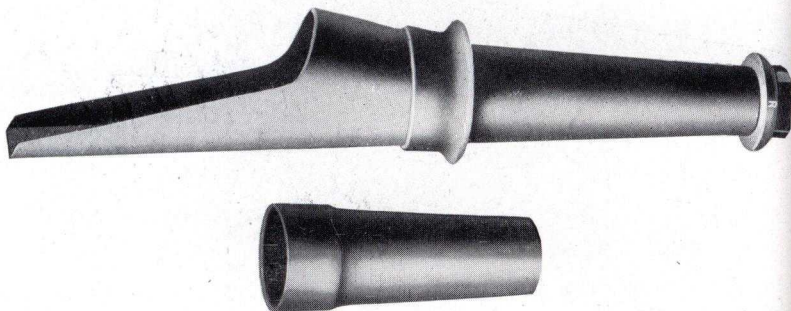
REVISED OCTOBER 15, 1919

SIZE	PER SET	GAUGE	SIZE	PER SET	GAUGE
2 1/4 x 7 in.	\$13.75	No. 11	3 1/2 x 10 in.	\$20.50	No. 9
2 1/4 x 7 1/2 "	13.90	" 11	3 1/2 x 10 1/2 "	20.75	" 9
2 1/2 x 7 1/2 "	14.00	" 11	3 1/2 x 11 "	21.00	" 9
2 1/2 x 8 "	14.25	" 11	3 1/2 x 12 "	23.00	" 9
2 3/4 x 8 "	14.75	" 10	3 3/4 x 11 "	24.75	" 8
2 3/4 x 8 1/2 "	15.00	" 10	3 3/4 x 12 "	25.00	" 8
2 3/4 x 9 "	15.25	" 10	4 x 12 "	29.00	" 7
3 x 9 "	16.00	" 10	4 1/4 x 12 "	33.75	" 7
3 x 10 "	17.50	" 10	4 1/2 x 12 "	41.50	" 6
3 1/4 x 9 "	18.00	" 9	4 1/2 x 13 "	43.50	" 6
3 1/4 x 10 "	18.50	" 9	5 x 14 "	55.75	" 5
3 1/4 x 11 "	19.00	" 9			

Discount.....

Wrought Steel Wagon Skeins

No. 31 PATTERN



The entire length of this skein is one piece, extra heavy, skein steel, thoroughly welded.

The collar is made of wrought iron, forged and securely shrunk on.

The threaded plug at point is also made of wrought iron, thoroughly welded to the skein and has deep cut threads.

The spindles are smooth and uniform.

The boxes on these skeins fit closely all around and are made to be pressed into the hubs.

Wedge in boxes furnished when so ordered.

New Price List of No. 31 Steel Skeins and Boxes

REVISED OCTOBER 15, 1919

SIZE	PER SET	GAUGE	SIZE	PER SET	GAUGE
$2\frac{3}{8}$ x 7 in.	\$13.75	No. 11	$3\frac{1}{4}$ x 11 in.	\$19.00	No. 9
$2\frac{1}{2}$ x $7\frac{1}{2}$ "	14.00	" 11	$3\frac{1}{2}$ x 10 "	20.50	" 9
$2\frac{1}{2}$ x 8 "	14.25	" 11	$3\frac{1}{2}$ x 11 "	21.00	" 9
$2\frac{3}{4}$ x 8 "	14.75	" 10	$3\frac{1}{2}$ x 12 "	23.00	" 9
$2\frac{3}{4}$ x $8\frac{1}{2}$ "	15.00	" 10	$3\frac{3}{4}$ x 11 "	24.75	" 8
$2\frac{3}{4}$ x 9 "	15.25	" 10	$3\frac{3}{4}$ x 12 "	25.00	" 8
3 x 9 "	16.00	" 10	4 x 12 "	29.00	" 7
3 x 10 "	17.50	" 10	$4\frac{1}{4}$ x 12 "	33.75	" 7
$3\frac{1}{4}$ x 9 "	18.00	" 9	$4\frac{1}{2}$ x 13 "	43.50	" 6
$3\frac{1}{4}$ x 10 "	18.50	" 9	5 x 14 "	55.75	" 5

Discount

"VULCAN BRAND" STEEL AXLES

FOR
BUGGIES, WAGONS
and CARRIAGES

SPECIALTIES

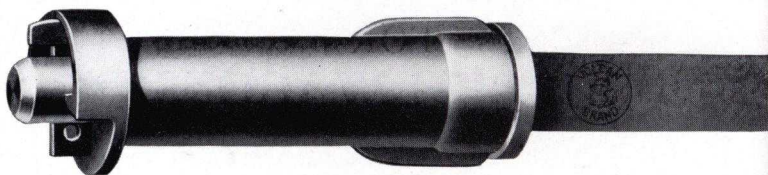
HEAVY TRUCK AXLES, ROLLER
and BALL BEARING TRAILER AXLES



Our Guarantee

We warrant our axles to be *free from defects* and to be made in a *workmanlike manner*. If breakage occurs from imperfection of material or workmanship, we will replace without charge.

Loose and Solid Collar Axles



Linch Pins and Patent Washers, Nos. 1 or 2



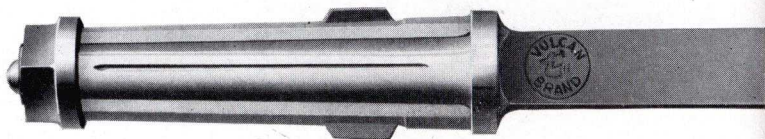
No. 1—Common Loose Collar Axle

No. 1 Loose Collar Axles can be furnished in one piece.



No. 2—Solid Collar Concord

No. 2 Farm Wagon Axles *always* made in one piece.



No. 6—Concord Express, Solid Collar

When ordering of above styles always give box length, and when wanted in one piece give exact distance between "collars."

For standard size spindles see page 40.

Net Extras on Nos. 1, 2 and 6

	Cents per Pound
A—Fan or Tapered Bed.....	\$.00¼
B—Coach Shape.....	.00½
C—Swaging Nos. 1 to 6.....	.00¼
D—Square and octagon.....	.00½
E—{ Short bed, 10 to 20 inches.....	.02
{ Short bed, under 10 inches.....	.04
{ Size under 1½ inch.....	.01
F—{ Sizes over 3 inches.....	.01½
{ Sizes over 4 inches.....	.02
G—Case hardening.....	.01
H—Welding Axles.....	.02½
I—Without boxes.....	.00¼
J—Nos. 2 and 6, one piece, 40 inches and over B. C.....	.01½
K—No. 1 and Farm Wagon, 30 inches and under between collars.....	.02½
L—No. 1 and Farm Wagon—over 30 inches and under 40 inches between collars.....	.02
M—Extra for No. 1 axles finished with linch pins and washers, or with linch pins only.....	.00½
N—Axles furnished with plain washers and cotter pins.....	.00½
O—No. 2 Axles furnished with linch pins and washers or with linch pins only.....	.01
P—Extra charge net for Nos. 1 to 6 axles with nib projecting through nut and drilled to take spring cotter, or drilled through nut.....	.00¼
Q—Axles with boss in center, to and including 2 inches, per axle.....	.50
Sizes over 2 inches, per axle.....	1.00
R—Extra for double groove.....	.00¼
S—Extra for patent lubricator groove.....	.00¼
T—Extra for drilling holes to 5⁄8 inch..... each	.05
Larger holes..... each	.10
U—Arching or dropping axles to and including 3 inches, arch or drop, per lb.....	.01½
Arch or drop over 3 inches to and including 5 inches, per lb..	.02
Arch or drop over 5 inches.....	.03

Half Patent Double Collar Axles



Nos. 11 Fantail

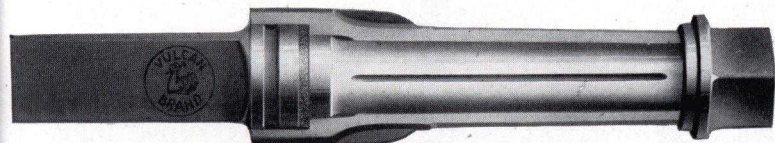


Nos. 11 Square

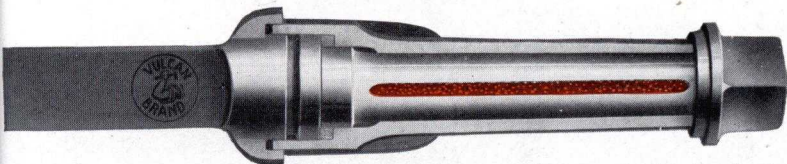


Nos. 11 Coach

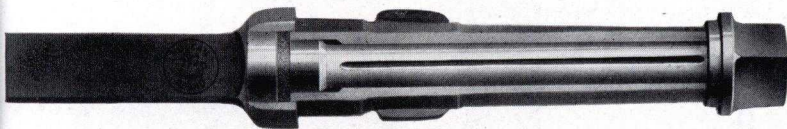
Half Patent Axles



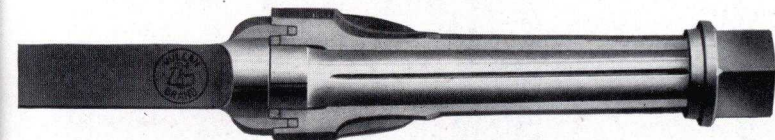
Nos. 11 and 12 Double Collar



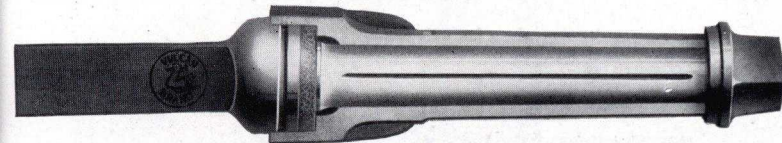
Nos. 11 and 12 Double Collar and Collinge Collar with Felt Pad



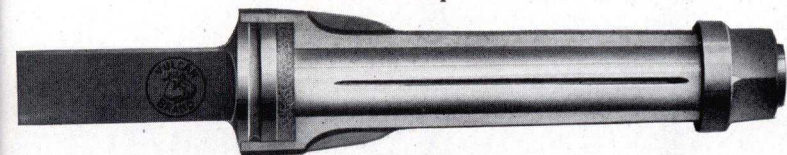
Nos. 13 and 14—Plain "Dug-Out" Collar



Nos. 13 and 14—Plain "Dug-Out" Collar with Double Flange Box

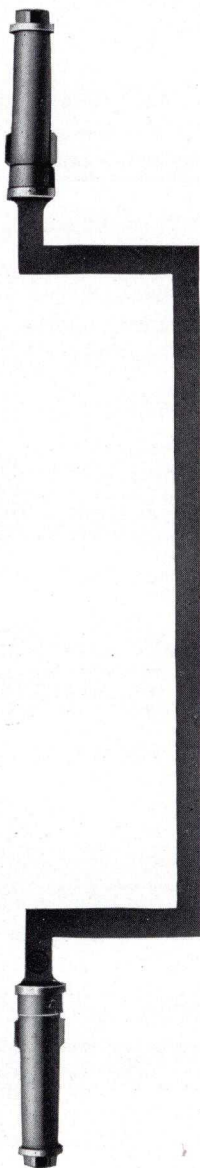


Nos. 7 and 8 or Nos. 11 and 12—Round Back Collar. Made either Plain or Swell Taper



Nos. 7 or 8—Large Collar—Plain Taper Spindle. Large Collar Washer Surface

Cranking and Special Shapes



Shape "A"—One-Piece Road Cart



Shape "B"—One-Piece Road Wagon (Hind)



Shape "C"—One-Piece Road Wagon (Front)

Special Shape Axles



True Sweep Buggy Axle, Shape "G"—Arched from 1½ inch to 5 inches



Bike Axle, Shape "H"—Recessed for Wood Beds



Axle for Runabout Wagon, Shape "I"—Made in No. 11 Style



Axle for Runabout Wagon, Shape "J"—Made in No. 11 Style



Fantail Swaged Buggy, Arch, Shape "K"—No. 11 Style



Fantail Swaged Buggy, Drop, Shape "L"—No. 11 Style



Road Cart in Halves, Arch, Shape "M"—No. 11 Style

STANDARD PRICE LIST PER SET OF

Half Patent Double Collar Axles with Plain or Swell Taper Spindles

Nos. 7, 8, 11, 12, 13, 14	$\frac{3}{4}$ to $\frac{1\frac{1}{2}}$	1	$1\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$1\frac{1}{2}$
LONG BED	\$5.50	\$6.00	\$6.50	\$7.00	\$8.50	\$12.00	\$15.00
SHORT BED	\$4.50	\$5.00	\$5.25	\$5.75	\$7.00	\$9.50	\$12.50

Standard Specifications Effective July 1, 1917

HALF PATENT AXLES

SIZE BEDS	$\frac{3}{4}$	$\frac{7}{8}$	$\frac{1\frac{1}{2}}$	1	$1\frac{1}{16}$	$\frac{1}{8}$	$1\frac{1}{4}$	$\frac{1}{2}$
LENGTH SPINDLES	$5\frac{1}{2}$	$6\frac{1}{2}$	$6\frac{1}{2}$	$6\frac{1}{2}$	$6\frac{1}{2}$	$6\frac{1}{2}$	$7\frac{1}{2}$	8

NOS. 1, 2 AND 6 LOOSE AND SOLID COLLAR AXLES

SIZE BEDS	$\frac{3}{4}$	$\frac{7}{8}$	$\frac{1\frac{1}{2}}$	1	$1\frac{1}{16}$	$\frac{1}{8}$	$1\frac{1}{4}$	$\frac{1}{2}$
LENGTH SPINDLES	$5\frac{1}{2}$	$6\frac{1}{2}$	$6\frac{1}{2}$	$6\frac{1}{2}$	$6\frac{1}{2}$	$6\frac{1}{2}$	$7\frac{1}{2}$	8

No Half Patent Axles or Boxes Made in Sizes Larger Than $1\frac{1}{2}$ Inch

The list prices for long bed axles shown above are for axles with 25-inch beds or under.
An extra charge will be made for axles with beds over 25 inches long, as per list of extras.

Net Extras to Standard List

1. Coach Shape

* PER SET

For Coach Shape to 1 in.	\$0.10
For Coach Shape, $1\frac{1}{8}$ in. to $1\frac{1}{4}$ in. ....	.25
For Coach Shape, $1\frac{3}{8}$ in. to $1\frac{1}{2}$ in. ....	.50

2. Swaging

For Fantail swaged, plain swaged and straight swage to $1\frac{1}{4}$ in. ....	.10
$1\frac{3}{8}$ in. and $1\frac{1}{2}$ in. ....	.50

3. Case Hardening

To $1\frac{1}{4}$ in. ....	.50
$1\frac{3}{8}$ to $1\frac{1}{2}$ in. ....	.75

4. Square and Round and Square and Octagon

For square and round, and square and octagon, Nos. 7 and 8 and 11 to 22 (in halves) same extra charge as coach shape.	
When made with square ends or center, or ends in any irregular shape to $1\frac{1}{4}$ in. ....	.25

5. Special Drafts

a For special drafts and Stiver's pattern axles $\frac{3}{4}$ in. to $1\frac{1}{4}$ in., Nos. 7 and 8 and Nos. 11 to 22, plain fantail, grooved or set on edge. ....	.10
b Fantail swaged both sides, grooved or set on edge. ....	.20
c Plain Fantail spread, or enlarged both ways from collar. ....	.30
d Fantail, part swage, leaving enlarged ends or centers, spread or enlarged both ways from collar. ....	.40
e Fantail swaged, spread or enlarged both ways from collar. ....	.40
f Regular swaged with plain centers, or ends, i. e., part swaged. ....	.15
g Roman Bike Beds including shaping.	1.00

Net Extras to Standard List—Continued

6. Welding or One-Piece

	PER SET
1 in. and under in lots of 50 sets or more.....	\$0.15
1 in. and under in lots less than 50 sets.....	.25
1 $\frac{1}{16}$ in. in lots of 50 sets or more.....	.25
1 $\frac{1}{16}$ in. in lots less than 50 sets.....	.35
1 $\frac{1}{8}$ in. in lots of 50 sets or more.....	.35
1 $\frac{1}{8}$ in. in lots less than 50 sets.....	.45
1 $\frac{1}{4}$ in. in lots of 50 sets or more.....	.45
1 $\frac{1}{4}$ in. in lots less than 50 sets.....	.55
1 $\frac{3}{8}$ in. and 1 $\frac{1}{2}$ in. any quantity.....per lb.	.02
One-piece square beds, not hammered; to and including 1 $\frac{1}{4}$ in. —25 sets and over.....	.15
Less than 25 sets.....	.25
1 $\frac{3}{8}$ and 1 $\frac{1}{2}$ in., 25 sets and over.....	.25
Less than 25 sets.....	.35

7. Square Centers

Extra for square center or center spot, on welded axles No. 7 to 21 on sizes to 1 $\frac{1}{4}$ in.....	.40
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8. Extra Long Beds

Beds over 25 in. to and including 28 in. on sizes to and including 1 $\frac{1}{4}$ in.....	.10
1 $\frac{3}{8}$ and 1 $\frac{1}{2}$ in.....	.25
Beds over 28 in. and not over 31 in. to 1 $\frac{1}{4}$ in. inclusive.....	.30
1 $\frac{3}{8}$ in. and 1 $\frac{1}{2}$ in.....	.50

9. Cranking

PRICES ON APPLICATION

10. (A) Forming Axles Hot or Cold

To 1 $\frac{1}{2}$ in. Arch or Drop in size to 1 $\frac{1}{4}$ in.....	.05
To 2 $\frac{1}{2}$ in. Arch or Drop in size to 1 $\frac{1}{4}$ in.....	.10
Above 2 $\frac{1}{2}$ in. Arch or Drop in size to 1 $\frac{1}{4}$ in.....	.20
LARGER SIZES PRICES ON APPLICATION	

(B) Forming Duplex Axles

To 1 $\frac{1}{4}$ in. inclusive.....	.25
1 $\frac{3}{8}$ and 1 $\frac{1}{2}$ in.....	.50

Net Extras to Standard List—Continued**11. Dug-out**

PER SET

Dug-out collars, Nos. 13 and 14, and 21 and 22, to and including	
1 in.....	\$0.20
1 $\frac{1}{16}$ and 1 $\frac{1}{8}$ in.....	.25
1 $\frac{1}{4}$ and 1 $\frac{3}{8}$ in.....	.75
1 $\frac{1}{2}$ in.....	1.00
When above are made with double flange boxes, extending over and under flange of collar, same extra as Section 12.	

12. Collinge Collar

Collinge collar or special collar axles, in any way different from plain dugout collars, covered by Section 11, on Nos. 7 and 8, and 11 to 22, and all double flange box axles to and including, 1 in.....	.25
1 $\frac{1}{16}$ in. and 1 $\frac{1}{8}$ in.....	.40
1 $\frac{1}{4}$ in.....	.60
1 $\frac{3}{8}$ in.....	1.00
1 $\frac{1}{2}$ in.....	1.50

13. Oil Grooves

Oil grooves for pads, or other similar groove and felt pads, to and including:

1 $\frac{1}{8}$ in.....	.10
1 $\frac{1}{4}$ in.....	.15
1 $\frac{3}{8}$ in.....	.50
1 $\frac{1}{2}$ in.....	1.00

NOTE: This extra Section 13, is to apply to all grooving of spindle, other than the regular ordinary single oil groove, such extra to apply whether groove be for felt pads, lubricating or any other purpose, and also covers any drilling of spindles.

14. Plated Nuts

Plated Nuts, Nos. 19 to 22 only, full plated.....	.50
Face plated.....	.25

NOTE: Filed or polished nuts cannot be put on special axles, long distance, lubricating dustproof, etc., and same be sold at less price than No. 19, with all other extras.

Net Extras to Standard List—Continued**15. Plated Nuts Export**

	PER SET
Axles of any grade for export, with nickel plated nuts at following extras:	
To $1\frac{1}{8}$ in.....	\$0.50
$1\frac{1}{4}$ in.....	.75
Larger.....	1.00

16. Double Nuts

Double nuts may be furnished on Nos. 7 and 8, and 11 to 22, to	
$1\frac{1}{8}$ in.....	.50
$1\frac{1}{4}$ to $1\frac{3}{8}$ in.....	1.00
$1\frac{1}{2}$ in.....	1.75
These are minimum extras and net above all other extras.	

17. Finished Nuts

Malleable Nuts, finished open end.....	per lb.
Solid end.....	per lb.
None to be sold at less than 20c per set.	
PRICES ON APPLICATION	

18. Finished Extra Boxes

For Nos. 7 to 22 axles.....	per lb.
Double flange for Nos. 13 and 14.....	per lb.
PRICES ON APPLICATION	

19. Wrought Boxes

Wrought Iron boxes, Nos. 7 to 22.	
PRICES ON APPLICATION	

20. Extra Washers

PRICES ON APPLICATION	
-----------------------	--

21. Wrenches

Malleable Iron Wrenches.....	per lb.
	15

22. Packing Cases

Large Cases.....	1.25
Small Cases.....	1.00
Long Cases for export, or hooped for long distance shipment,	
.....each	
Short Cases, for export, or hooped for long distance shipment,	
.....each	
PRICES ON APPLICATION	

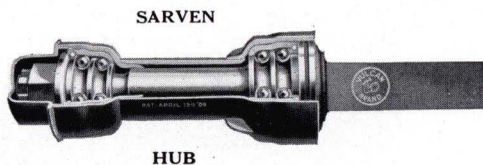
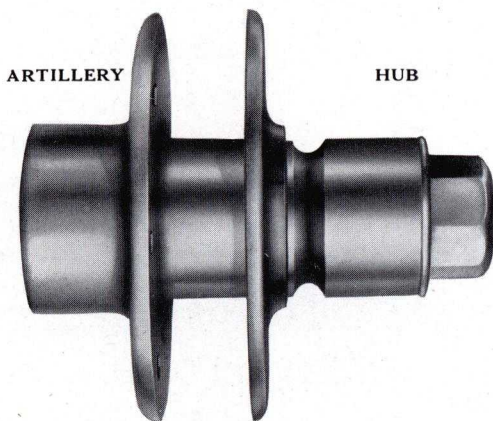
23. Bundling

Bundling Axles.....	per set
	10

24. Small Quantities

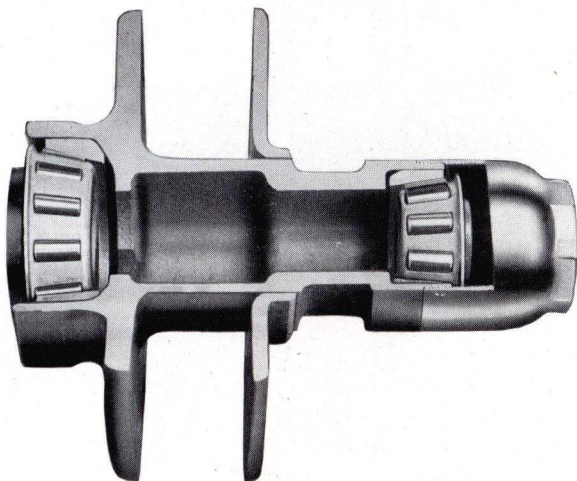
Orders for less than five set of a kind or size.	
To $1\frac{1}{8}$ in.....	15
$1\frac{1}{4}$, $1\frac{3}{8}$, $1\frac{1}{2}$ in.....	25

Crescent Ball Bearing Axles FOR TRAILERS



Furnished in sizes $1\frac{1}{8}$ inch, $1\frac{1}{4}$ inch and $1\frac{3}{8}$, in One piece Square; Coach or Half Axles ready to weld

“VULCAN” Roller Bearing Trailer Axles With Artillery Hubs

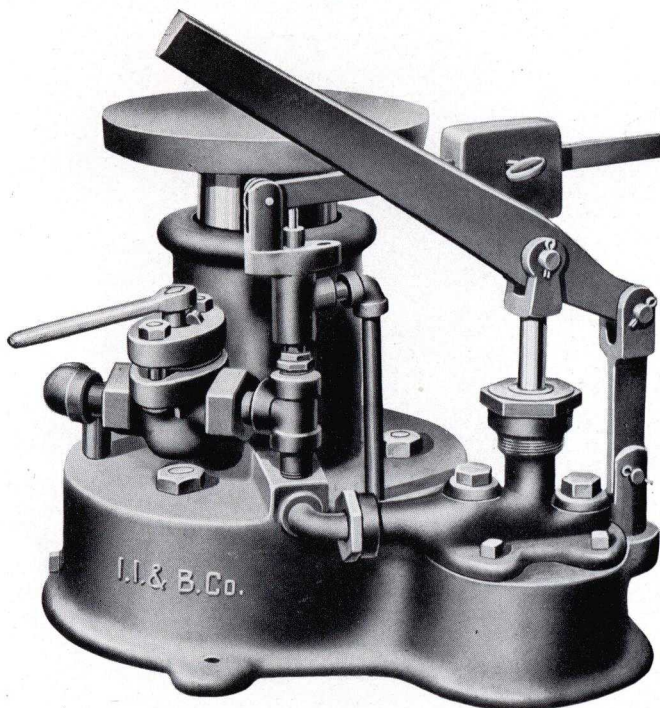


These Roller Bearings are interchangeable with Ford front axles and designed to equip Trailers with a Roller Bearing Axle at a slightly higher cost than Ball Bearing.

Furnished in sizes of $1\frac{1}{4}$ in. and $1\frac{3}{8}$ in. square and coach bed half axles ready to weld or same shape beds in one piece.

Hydraulic Press

No. 1



This is a very convenient machine for pressing skeins on axles, boxes into light hubs, and bands on hubs of wagon and buggy wheels.

This press has a capacity of 12 tons pressure.

The pump is made of brass, the balance of cast and wrought iron.

Diameter of ram plunger, 4 inches.

Diameter of pump plunger, $\frac{3}{4}$ inch.

It will raise 4 inches. Weight, 180 pounds.

It can be operated by hand or power.

It can also be used to advantage for other purposes where pressure is required.

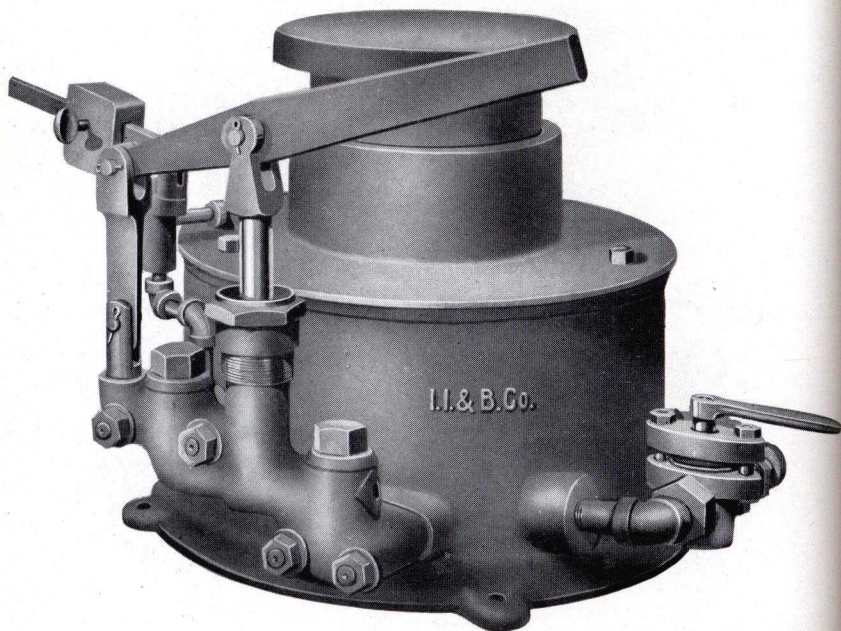
Full directions are furnished with each machine.

Price, boxed \$100.00

Discount

Hydraulic Press

No. 2



This machine is especially intended for pressing skeins on axles, boxes into large hubs, and bands on hubs of heavy wagon and truck wheels. Can also be used for other purposes where heavy pressure is required.

This press has a capacity of 50 tons pressure.

The pump is made of brass, the balance of cast and wrought iron.

Diameter of ram plunger, 8 inches.

Diameter of pump plunger, from 1 to 1 $\frac{1}{4}$ inches.

It will raise 6 inches. Weight, about 600 pounds.

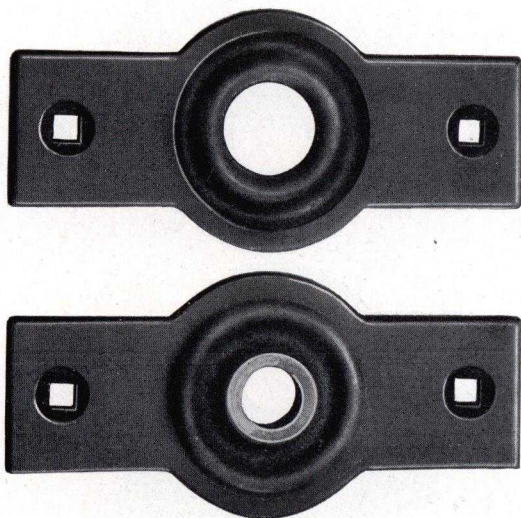
It can be operated by hand or power.

Full directions are furnished with each machine.

Price, boxed \$220.00

Discount

Cast Iron Bolster Plates



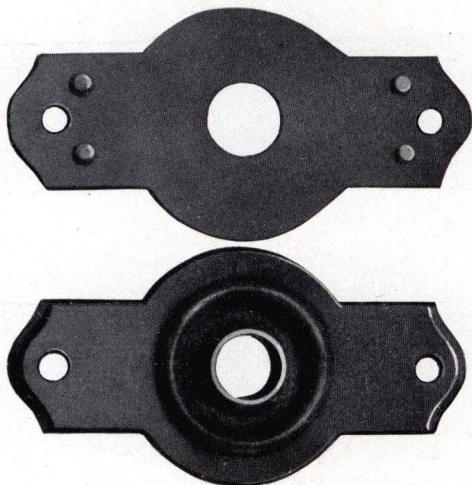
Common

Our bolster plates, like all our castings, are made of first-class iron.
Are strong and durable, not liable to breakage, smooth and clean.

NO. OF PLATE	LENGTH	CENTER TO CENTER OF HOLES	WIDTH AT CENTER	WIDTH AT ENDS	KING BOLT HOLE	WEIGHT ABOUT
No. 1 Common	9½ in.	7½ in.	5¼ in.	3½ in.	1¼ in.	10¾ lbs.
No. 2 "	11½ "	9 "	5½ "	3½ "	1¼ "	13 "
No. 3 "	12 "	9½ "	5¾ "	3¾ "	1¼ "	15 "
No. 4 "	16 "	10¾ "	6½ "	4¼ "	1¼ "	38 "

Price.....per pound

Cast Iron Bolster Plates



Improved

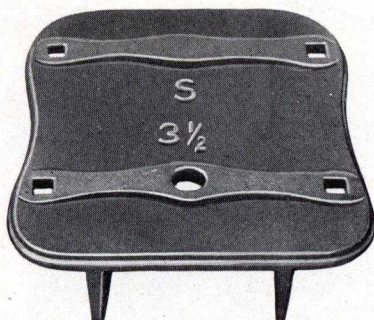
Besides the styles shown here we can furnish any other kinds required.

Orders executed promptly. A fair assortment is always carried in stock sizes and styles.

NO. OF PLATE	LENGTH	CENTER TO CENTER OF HOLES	WIDTH AT CENTER	WIDTH AT ENDS	KINGBOLT HOLE	WEIGHT ABOUT
No. 5 Improved	8 in.	6 $\frac{3}{4}$ in.	4 $\frac{1}{2}$ in.	2 in.	1 in.	5 $\frac{1}{2}$ lbs.
No. 6 "	10 "	8 "	5 $\frac{1}{2}$ "	3 "	1 $\frac{1}{4}$ "	8 $\frac{1}{2}$ "
No. 7 "	10 $\frac{3}{4}$ "	8 $\frac{3}{4}$ "	5 $\frac{1}{2}$ "	3 $\frac{1}{2}$ "	1 $\frac{1}{4}$ "	11 $\frac{1}{2}$ "

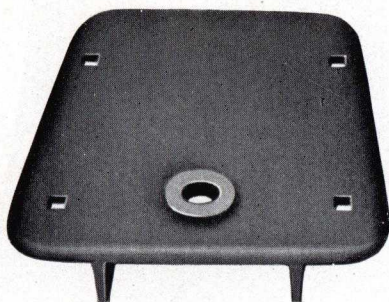
Price per pound

Cast Iron Reach Plates



Flanged Pattern in One Piece, Ribbed Style

NO. OF PLATE	WIDTH BETWEEN FLANGES	DEPTH OF FLANGES	DIAMETER OF LARGE HOLE	WEIGHT ABOUT
No. S 3	3 in.	1 1/2 in.	3/4 in.	4 1/2 lbs. ea.
No. S 3 1/4	3 1/4 "	1 5/8 "	3/4 "	5 " "
No. S 3 1/2	3 1/2 "	1 5/8 "	3/4 "	6 " "
No. S 3 3/4	3 3/4 "	1 3/4 "	3/4 "	7 1/2 " "
No. S 4	4 "	1 3/4 "	3/4 "	8 " "

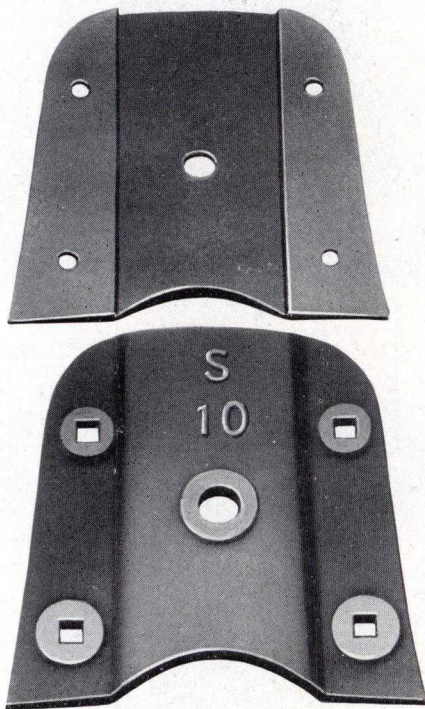


Flanged Pattern, in One Piece, Plain Top

NO. OF PLATE	WIDTH BETWEEN FLANGES	DEPTH OF FLANGES	DIAMETER OF LARGE HOLE	WEIGHT ABOUT
No. 2 3/4	2 3/4 in.	1 1/4 in.	7/8 in.	4 1/2 lbs. ea.
No. 3	3 "	1 3/8 "	7/8 "	5 1/2 " "
No. 3 1/4	3 1/4 "	1 3/8 "	7/8 "	6 " "
No. 3 1/2	3 1/2 "	1 3/4 "	7/8 "	7 1/2 " "
No. 3 3/4	3 3/4 "	1 5/8 "	3/4 "	7 " "
No. 4	4 "	1 1/2 "	7/8 "	7 " "
No. 4 1/2	4 1/2 "	1 1/2 "	7/8 "	7 1/2 " "

Price.....per pound

Cast Iron Reach Plates



Plain Pattern in Two Parts

NO. OF PLATE	FOR WAGONS	FOR REACH	DIAMETER OF LARGE HOLE	WEIGHT ABOUT
No. S 8.....	2 $\frac{3}{4}$ in.	3 $\frac{1}{2}$ in.	$\frac{3}{4}$ in.	7 lbs. per pair
No. S 9.....	3 " "	3 $\frac{3}{4}$ " "	$\frac{3}{4}$ " "	8 " " "
No. S 10.....	3 $\frac{1}{4}$ " "	3 $\frac{7}{8}$ " "	$\frac{3}{4}$ " "	8 $\frac{1}{2}$ " " "
No. S 11.....	3 $\frac{1}{2}$ " "	4 " "	$\frac{3}{4}$ " "	9 $\frac{1}{2}$ " " "
No. S 12.....	4 " "	4 $\frac{1}{2}$ " "	1 " "	12 " " "

Can also furnish Reach Plates of any other design not shown here.

Price.....per pound

Cast Iron Wagon Rub Irons



Plain Pattern

No. 1

Length.....	7½ inches
Width inside flange.....	2¼ "
Weight about.....	1½ lbs. each



Slotted Pattern

No. S 2

No. S 3

Length.....	6¾ inches	7½ inches
Width inside flange.....	2⅛ "	2⅞ "
Weight about.....	1½ lbs. each	2½ lbs. each



Improved Cut Under Pattern

No. S 4

Length over all.....	10 inches
Depth of concave.....	3 "
Height of concave.....	1½ "
Weight about.....	5½ lbs. pair

Price..... per pound

Cast Iron Wagon Rub Irons



Cut Under Pattern

No. 5

Length over all.....	10	inches
Depth of concave.....	1¼	"
Height of concave.....	2¾	"
Weight about.....	2	lbs. each



Palm's Patent

No. 1

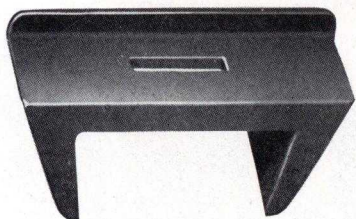
No. 2

Width at bottom (outside).....	8	inches	10	inches
Height.....	6	"	6½	"
Indentation.....	1½	"	2	"
Weight about.....	4	lbs. each	5	lbs. each

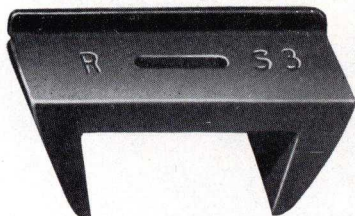
We always aim to please our customers and will gladly furnish any style of Cast Rub Iron not shown here.

Price.....per pound

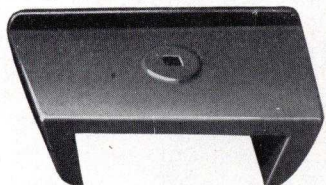
Cast Iron Wagon Brake Shoes



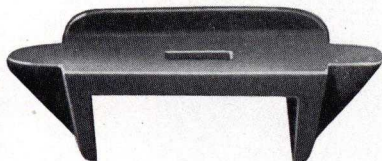
Nos. S 1, S 2, S 4, 6 and 7, Light Gear Shoe. Right and Left



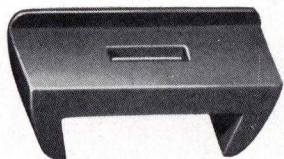
No. S 3, Heavy Gear Shoe. Right and Left



No. S 5. For Body or Gear



No. 8



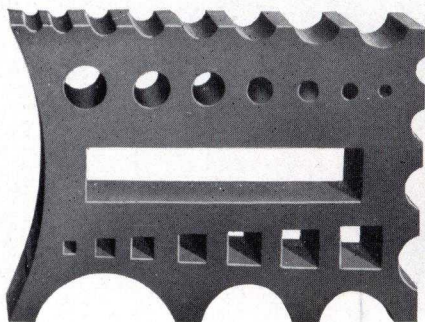
No. S 9

	Width Between Flanges Top	Width Between Flanges Bottom	Width	Weight About Each
No. S 1	3 ³ / ₈ in.	3 in.	2 in	1 ¹ / ₄ lb.
No. S 2	3 ³ / ₈ "	3 "	2 ¹ / ₈ "	1 ¹ / ₂ "
No. S 4	3 ¹ / ₂ "	3 ³ / ₈ "	2 ¹ / ₈ "	2 "
No. 6	3 "	2 ⁷ / ₈ "	2 "	1 ¹ / ₂ "
No. 7	3 ¹ / ₄ "	3 ¹ / ₈ "	2 "	1 ¹ / ₂ "
No. S 3	4 "	3 ⁵ / ₈ "	2 ¹ / ₂ "	3 "
No. S 5	4 "	3 ¹ / ₂ "	2 ⁷ / ₈ "	2 ¹ / ₂ "
No. 8	3 ⁷ / ₈ "	3 ⁵ / ₈ "	2 ¹ / ₄ "	2 "
No. S 9	3 ³ / ₈ "	3 ¹ / ₄ "	2 "	1 "

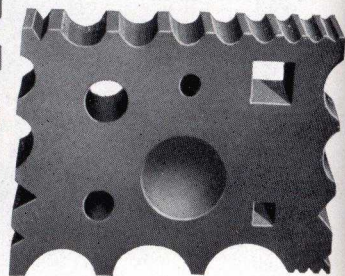
We can also furnish other styles whenever required.

Price per pound

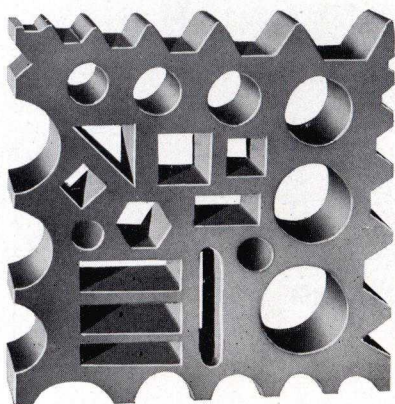
Cast Iron Swage Blocks



Shape of No. 0



Shape of Nos. 1, 2 and 3



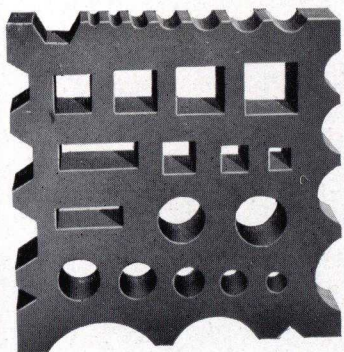
Shape of No. 0 1/2

Made of strong iron, cast smooth and accurate to pattern.

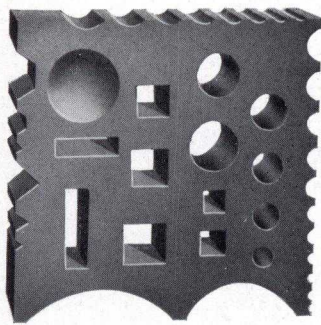
For dimensions see page 58

Price.....per pound

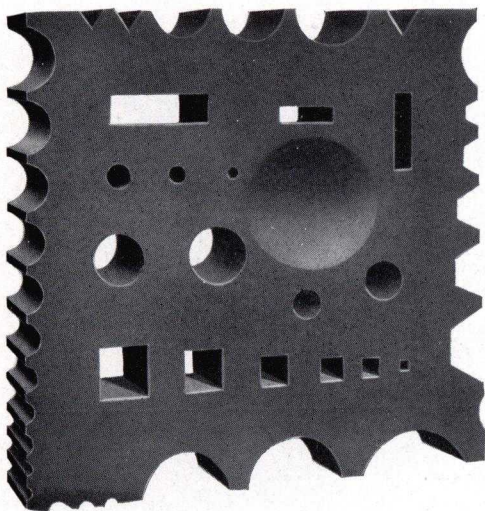
Cast Iron Swage Blocks



Shape of Nos. 1½, 2½ and 3½



Shape of Nos. 4 and 4½



Shape of No. 5

Made of strong iron, cast smooth and accurate to pattern.

For dimensions see next page.

Price.....per pound

Approximate Dimensions and Weights

	ROUND HOLES											
	No. 0	No. 0½	No. 1	No. 1½	No. 2	No. 2¼	No. 2½	No. 3	No. 3½	No. 4	No. 4½	No. 5
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
	½	1	1	1	1	1	1⅛	1	1	1	1¼	¾
	¾	1¼	1½	1¼	1½	1¼	1⅜	1⅜	1¼	1⅜	1⅜	⅞
	1	1½	2	1½	2	1½	1½	2	1⅜	1⅝	1⅝	1¼
	1¼	1⅞		2		2	2		1⅜	1⅞	2⅛	1½
	1½	2⅛		2¼		2¼	2¼		1⅞	2	3	2
	1⅞	2⅝		2½		2½	2½		2⅛	2½		2½
	2⅛	3⅛							2⅜			3
		3½										
	SQUARE HOLES											
	½	1¼	1	1	1	1	1⅛	1	1	1⅛	1⅛	¾
	¾	1½	2	1½	2	1½	1⅝	2	1¼	1¼	1⅝	1
	1⅛	2		2		2	2		1½	1½	2¼	1¼
	1⅜			2½		2½			1¾	1¾	2⅝	1½
	1⅝								2	2⅞		2
	1¾								2¼			2½
	2⅛								2½			
	RECTANGULAR HOLES											
	2⅝	1¼		1		1⅛	1⅛		1	⅞	1⅛	⅞
	x	x		x		x	x		x	x	x	x
	13	2½		3		3	3		3	3⅛	3	3
		¾		1¼		1¼	1¼		1⅛	1⅛	1⅝	1
		x		x		x	x		x	x	x	x
		4		3½		3½	3½		3⅝	4	4	4
		1⅙										1½
		x										x
		4										5
		1¼										
		x										
		4										
		¾										
		x										
		4¾										
	TRIANGULAR HOLES											
	2⅝											
	x											
	3¼											
	1⅞											
	Hex Hole											
	Thickn's											
	4	4	3¾	4	3⅞	4⅛	4	4⅜	4⅜	4	4⅜	6
	Width											
	14	15	10	12½	11⅞	13¾	14⅞	11⅞	16	15	18	24
	Length											
	19½	15	14	12½	14⅞	13¾	14⅞	15	16	15	18	24
	Wt about											
	170	123	106	100	126	135	148	143	198	164	255	675

Above does not include grooves around the outside.

Cast Iron Leveling Blocks

Especially Intended for Plow Work



These blocks are made of superior pig iron and are accurately planed on one side, unless otherwise ordered.

Can furnish either solid or ribbed pattern. The ribbed blocks are cast hollow and therefore weigh lighter.

To ascertain weight of solid blocks, figure one pound to four cubic inches. Ribbed blocks weigh about one third less.

STANDARD SIZES AS CARRIED IN STOCK

$1\frac{1}{2}$ x 10 x 12	2 x 14 x 20
$1\frac{1}{2}$ x 12 x 12	2 x 18 x 24
$1\frac{1}{2}$ x 14 x 20	2 x 18 x 36
$1\frac{1}{2}$ x 16 x 20	2 x 20 x 24
$1\frac{1}{2}$ x 16 x 24	2 x 20 x 30
$1\frac{1}{2}$ x 18 x 24	2 x 24 x 30
$1\frac{1}{2}$ x 20 x 24	$2\frac{1}{2}$ x 28 x 40

OTHER SIZES ARE MADE { $1\frac{1}{2}$ inches to 5 inches thick
 10 " " 28 " wide
 12 " " 80 " long

Price of solid pattern planed on one side.....cents per lb.

Price of ribbed pattern planed on one side.....cents per lb.

Solid pattern can be furnished planed on both sides and edges, at extra charge.

Blacksmiths' Cones or Mandrels



Plain Pattern

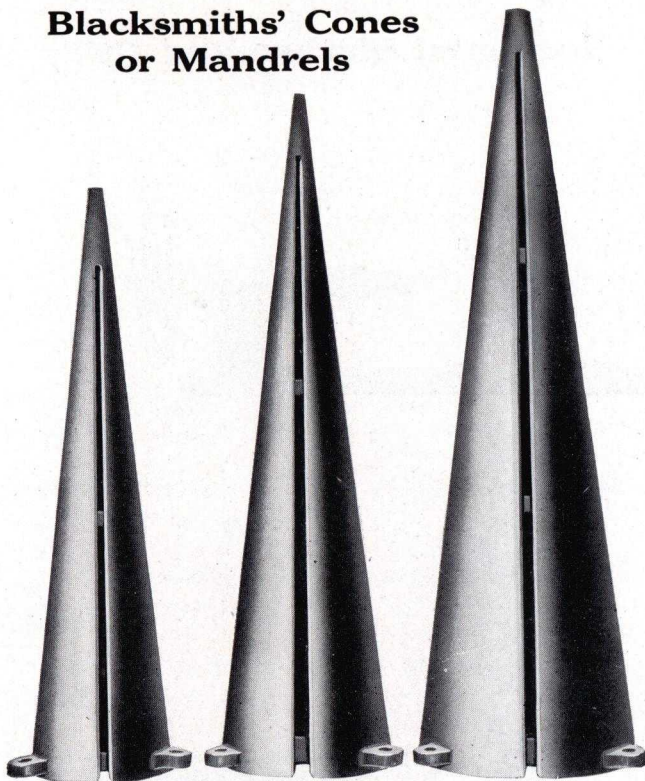
These are cast smooth and round, and are well adapted for forming rings, bands and similar work.

Dimensions

SIZE	HEIGHT	DIAMETER AT BASE	DIAMETER AT TOP	WEIGHT
No. 1	36 in.	8 in.	1 in.	About 55 lbs.
No. 1½	40 "	10 "	1 "	" 90 "
No. 2	48 "	12 "	1 "	" 115 "
No. 3	50 "	14 "	1 "	" 140 "
No. 4	54 "	16 "	2 "	" 200 "
No. 5	50 "	24 "	5 "	" 500 "

Price per pound

Blacksmiths' Cones or Mandrels



Cheney's Patent

These mandrels are made with a slot as shown in cut, which is very convenient for holding end of iron in bending rings; they are strengthened with ties inside the slot. The slot is also convenient for handling rings with tongs.

Dimensions

SIZE	HEIGHT	DIAMETER AT BASE	DIAMETER AT TOP	WEIGHT
No. 1	36 in.	8 in.	1 in.	About 60 lbs.
No. 1½	40 "	10 "	1 "	" 100 "
No. 2	48 "	12 "	1 "	" 125 "
No. 3	50 "	14 "	1 "	" 150 "
No. 4	54 "	16 "	2 "	" 220 "

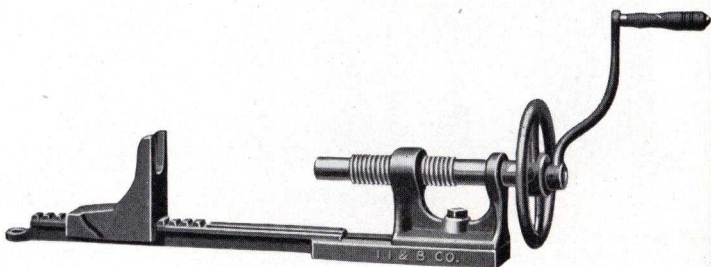
Price per pound

Horizontal Blacksmiths' Drills



No. 1

No. 1 Solid standard.....Price, \$2.40



No. 2

No. 2Price, \$2.50

No. 3 Similar to No. 2 but extra heavy.....Price, \$2.70

These drills are intended for drilling holes in tires and other similar work. They are always fitted for square shank bits but can be made for round shank bits at 50 cents list, extra.

Discount

Upright Drills

On the following pages we illustrate our line of upright drills, and invite the attention of all who are interested in the sale and use of such machines.

In getting out these drills it has been our purpose to manufacture a line of machines that are strong and durable, easy running, which will do first-class work and can be sold at a moderate price.

By an adjustable device on the Ball-Bearing and Bailey drills the self-feed can be easily changed to slow or fast feed, to suit the work.

The tables are held firmly in position at any point on the column by an improved cam, easily operated.

The spindles are made of polished steel, with a nut at the upper end, which takes up any wear of the spindle.

Our Ball-Bearing and Bailey drills are made with self-feed, which may be used or not, as desired.

The balance wheels can be easily removed if desired.

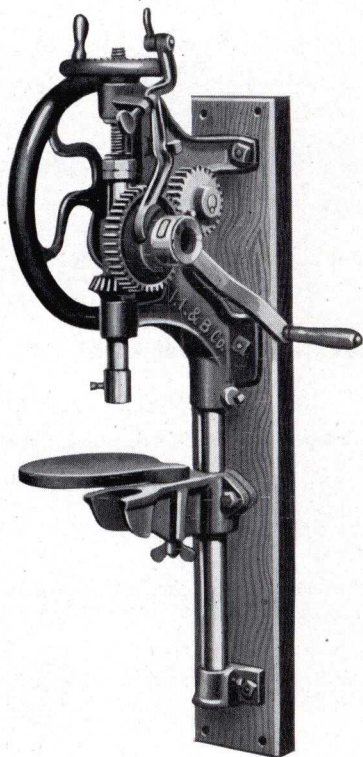
We use only the best material in these machines, and their construction and finish cannot be excelled.

Every drill is set in perfect line and tested before it leaves our works.

Full directions accompany each drill.

Handy Drill

No. 0



The spindle in this drill is made of steel, and to receive $\frac{1}{2}$ -inch straight-shank bits.

The self-feed may be used or not, as desired, by simply moving the dog, and can easily be changed to feed fast or slow.

The table can be fastened at any height on the column in a moment, and can be put out of the way entirely by turning to the side.

The crank or handle can be readily made long or short to suit the operator.

This machine will drill holes from 0 to 1 inch, and to the center of a 14-inch circle.

The spindle travels 3 inches.

Every drill is set in perfect line and tested before shipping.

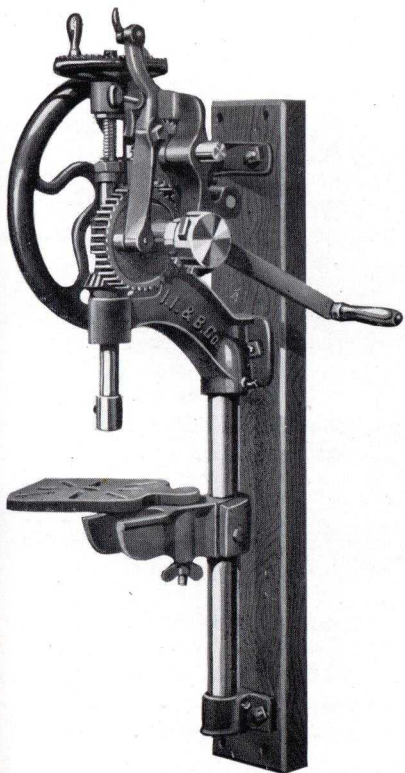
Shipping weight, 100 lbs.

Price, crated..... \$20.00

Discount

Handy Drill

No. 1



The spindle in this drill is made of steel, and to receive $\frac{1}{2}$ -inch straight-shank bits.

The self-feed may be used or not, as desired, by simply moving the dog, and can easily be changed to feed slow or fast.

The speed may be varied by changing the crank from one shaft to another, which is done quickly.

The table is provided with slots, for clamping down any article to be drilled, and can be fastened at any height on the column in a moment, or put out of the way entirely by turning to the side.

The crank or handle can readily be made long or short, to suit the operator.

This machine will drill holes from 0 to $1\frac{1}{4}$ inches, and to the center of a 15-inch circle.

The spindle travels $3\frac{1}{2}$ inches.

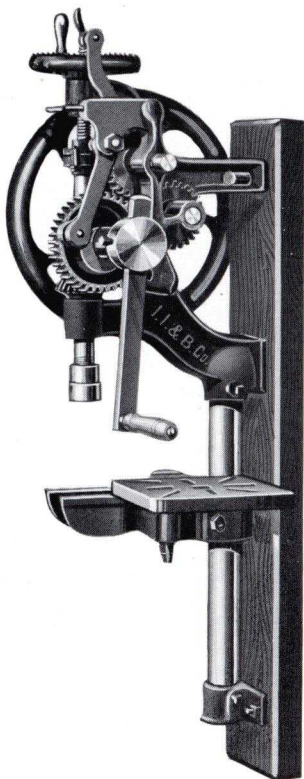
Every drill is set in perfect line, and tested before shipping.

Shipping weight, 120 lbs.

Price, crated,\$24.00

Discount.....

Ball-Bearing Drill



This drill is made with anti-friction bearings as shown in cut.

This reduces the friction to a minimum and makes it the lightest running drill on the market.

The spindle is made of steel, travels $3\frac{1}{2}$ inches, and is fitted for $\frac{1}{2}$ -inch straight-shank bits.

Will drill holes from 0 to $1\frac{1}{4}$ inches, and to the center of a 15-inch circle.

The self-feed may be used or not, as desired, by simply moving the dog, and can easily be changed to feed slow or fast.

The speed may be varied by changing the crank from one shaft to another, which is done quickly.

The table is provided with slots for clamping down any article to be drilled, and can be fastened at any height on the column in a moment or put out of the way entirely, by turning to the side.

The crank or handle can be readily made long or short to suit the operator.

Every drill is set in perfect line and tested before shipping.

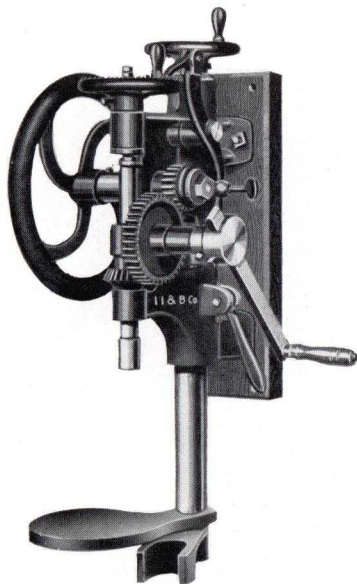
Shipping weight, 120 lbs.

Price, crated \$22.00

Discount

Bailey Drill

No. 2



By turning the hand-wheel at the top of drill the table may be raised or lowered.

It is held in place firmly by an eccentric.

The self-feed may be used or not.

The feed attachment can be easily changed to feed slow or fast, as desired.

The spindle of this drill is made to receive $\frac{1}{2}$ -inch straight-shank drill-bits, unless otherwise ordered.

This machine will drill from 0 to 1-inch hole, and to the center of a 10-inch circle.

The spindle will travel 3 inches.

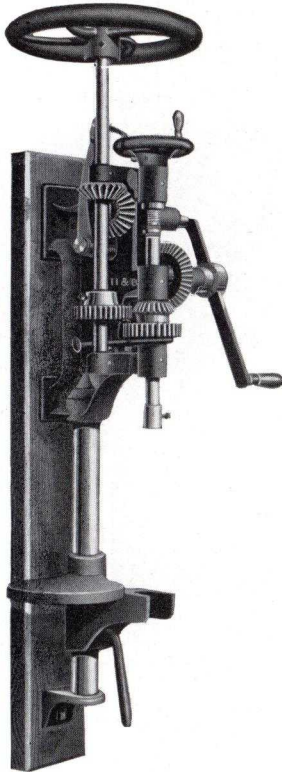
Shipping weight, 125 lbs.

Price, crated.....\$32.00

Discount.....

Bailey Drill

No. 3



The balance wheel shaft runs on a vertical bearing, causing the drill to run easily.

Different speeds may be obtained by changing the crank to different shafts.

The spindle of this drill is made to receive $\frac{1}{2}$ -inch straight-shank drill-bits, unless otherwise ordered.

This machine will drill from 0 to $1\frac{1}{4}$ -inch hole, and to the center of a 10-inch circle.

The spindle will travel $3\frac{1}{2}$ inches.

Shipping weight, 170 lbs.

Price, crated.....\$48.00

Discount.....

Bailey Drill

No. 4



Through an intermediate gear, the balance wheel may be easily disconnected.

By changing the crank from one shaft to another, different speeds may be obtained.

The spindle of this drill is made to receive $\frac{1}{2}$ -inch straight-shank drill-bits, unless otherwise ordered.

This machine will drill from 0 to $1\frac{1}{4}$ -inch hole, and to the center of a 10-inch circle.

The spindle will travel $3\frac{1}{2}$ inches

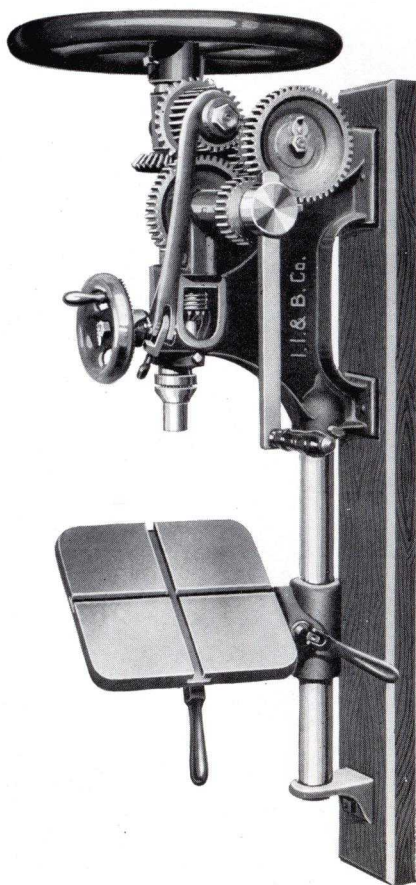
Shipping weight, 160 lbs.

Price, crated.....\$48.00

Discount.....

Bailey Drill

No. 5



This is a ball-bearing drill, which reduces the friction to a minimum and makes it very easy running.

The table may be fastened at any point on the column, and can be adjusted to any desired angle convenient to the operator. The work can be clamped to the table the same as on power drills.

Fast or slow speed may be obtained by sliding the large spur-gear backward or forward.

The spindle runs in a sleeve-bearing 9 inches long, which gives it great steadiness, and prevents the spindle from being worn and becoming loose.

The spindle is fed up or down by a worm working in a rack upon the spindle sleeve, and is easily operated by the feed wheel.

The spindle of this drill is made to receive $\frac{41}{64}$ -inch straight-shank drill-bits, unless otherwise ordered.

This machine will drill from 0 to $1\frac{1}{2}$ inches, and to the center of a 16-inch circle.

The spindle travels 4 inches.

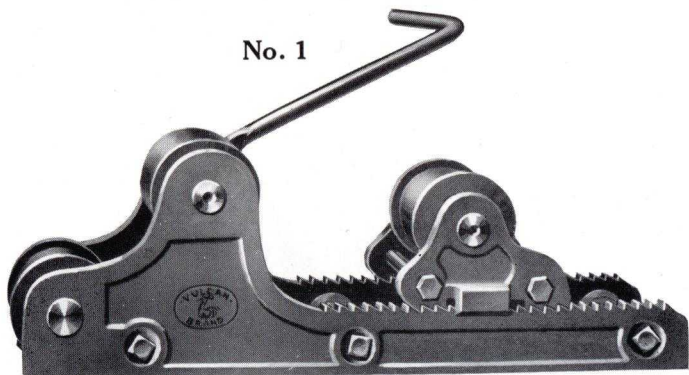
Shipping weight, 230 lbs.

Price, as shown in cut	Crated, \$ 72.00
With loose and tight pulleys, for power only	80.00
With loose and tight pulleys, for hand or power	84.00
With countershaft and cone pulleys, power only	120.00

Discount

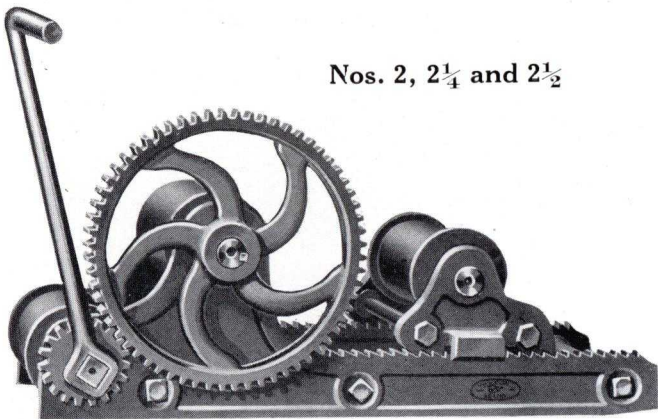
"Vulcan" Tire Benders

No. 1



No. 1 is made with turned rollers and bearings, and will bend $3\frac{1}{4}$ -inch tire, or smaller, to a circle 24 inches in diameter, or larger.

Price, with crank.....\$12.00

Nos. 2, $2\frac{1}{4}$ and $2\frac{1}{2}$ 

No. 2 is made with gear and pinion, has turned rollers and bearings, and will bend $3\frac{1}{4}$ -inch tire, or smaller, to a circle 24 inches in diameter, or larger. **Price, with crank**\$14.00

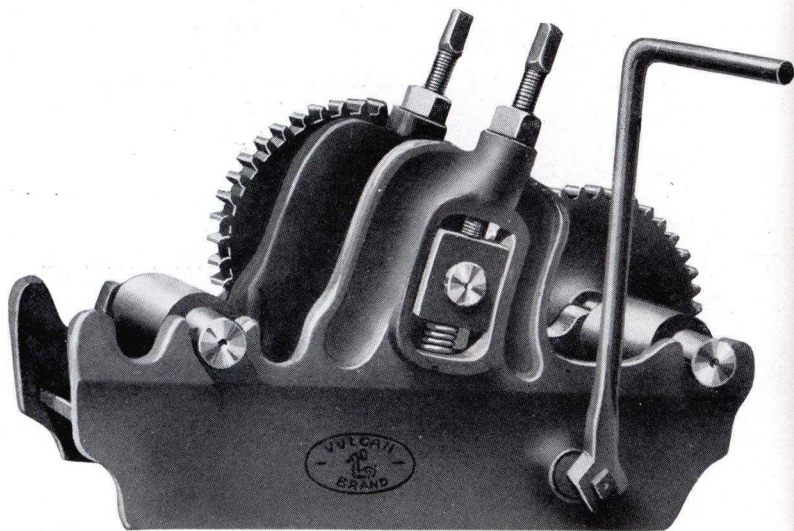
No. $2\frac{1}{4}$ is made same as No. 2, but will bend $4\frac{1}{2}$ -inch tire, or smaller, to a circle 24 inches in diameter, or larger. **Price, with crank**\$15.50

No. $2\frac{1}{2}$ is made same as No. 2, but will bend 6-inch tire, or smaller, to a circle 24 inches in diameter, or larger. **Price, with crank**\$17.00

Discount

“Vulcan” Tire Bender

No. 3



Extra Heavy

This machine is double-gearred, has turned rollers and bearings, is very strong and durable, and will bend 5-inch tire, or smaller, to a circle 24 inches in diameter, or larger.

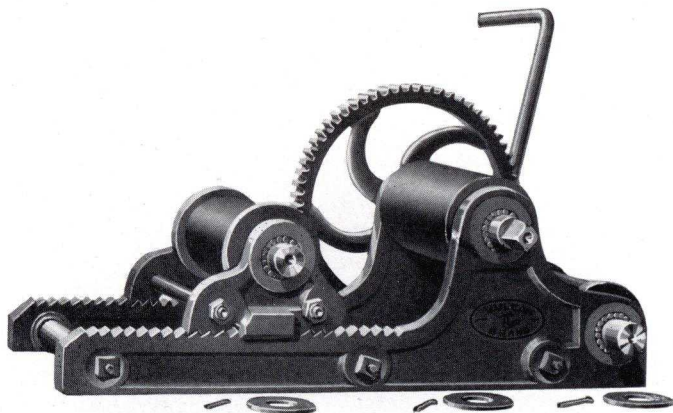
In bending very heavy tire, two cranks may be used on opposite sides, thus giving double power.

Price, with one crank.....	\$21.00
Price, with one pulley for power.....	29.00
Price, with loose and tight pulleys.....	32.00

Discount.....

“Vulcan” Roller-Bearing Tire Bender

Nos. 2, $2\frac{1}{4}$ and $2\frac{1}{2}$



All the journals in these machines are provided with steel roller-bearings, which make them very easy running.

The rolls are turned perfectly round and true, which insures good work.

No. 2 will bend $3\frac{1}{4}$ -inch tire, or smaller, to a circle 24 inches in diameter, or larger.

Price, with crank **\$16.00**

No. $2\frac{1}{4}$ will bend $4\frac{1}{2}$ -inch tire, or smaller, to a circle 24 inches in diameter, or larger.

Price, with crank **\$17.50**

No. $2\frac{1}{2}$ will bend 6-inch tire, or smaller, to a circle 24 inches in diameter, or larger.

Price, with crank **\$19.00**

Discount

New Improved "Vulcan" Tire Bender



The above cut shows our New Improved Tire Bender with center roll tilted to admit a welded tire or allow a heavy one formed into a circle to be removed without difficulty. In tilting center roll it is not necessary to knock out pins and lift out center roll and gear, but simply release the dogs on side of machine and turn up roll. The time consumed in this operation is only an instant. The rolls are turned perfectly round and true, which insures good work.

No. 12 will bend 3 1/4-inch tire, or smaller, to a circle 24 inches in diameter, or larger. **Price, with crank**..... **\$19.00**

No. 12 1/4 will bend 4 1/2-inch tire, or smaller, to a circle 24 inches in diameter, or larger. **Price, with crank**..... **\$20.50**

No. 12 1/2 will bend 6-inch tire, or smaller, to a circle 24 inches in diameter, or larger. **Price, with crank**..... **\$22.00**

Discount.....

New Improved "Vulcan" Roller-Bearing Tire Bender



The above cut shows our New Improved Roller-Bearing Tire Bender with center roll tilted to admit a welded tire or allow a heavy one formed into a circle to be removed without difficulty. In tilting center roll it is not necessary to knock out pins and lift out center roll and gear, but simply release the dogs on side of machine and turn up roll. The time consumed in this operation is only an instant. All the journals in these machines are provided with steel roller bearings which make them very easy running. The rolls are turned perfectly round and true, which insures good work.

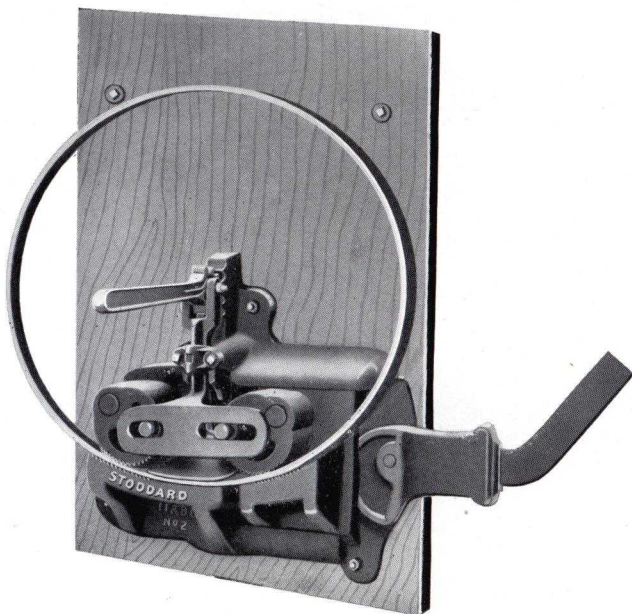
No. 12 will bend $3\frac{1}{4}$ -inch tire, or smaller, to a circle 24 inches in diameter, or larger. **Price, with crank**.....\$21.00

No. $12\frac{1}{4}$ will bend $4\frac{1}{2}$ -inch tire, or smaller, to a circle 24 inches in diameter, or larger. **Price, with crank**.....\$22.50

No. $12\frac{1}{2}$ will bend 6-inch tire, or smaller, to a circle 24 inches in diameter, or larger. **Price, with crank**.....\$24.00

Discount.....

The Improved Stoddard Tire Shrinker



The Stoddard Shrinker has been in the market for many years and its superior qualities are unquestionable. These machines take the tire on the flat side and have an anti-kinker attachment as shown in the cut, which prevents light tires from kinking.

These machines are fastened to the side of wall or post, take up no floor space, and are always ready for use. An iron lever stub is furnished with each shrinker, which can be lengthened to suit the operator. We warrant our Improved Stoddard Tire Shrinkers to upset tires and axles of the dimensions given below and to be of first-class material and workmanship. We are prepared to furnish these machines in the following sizes:

No. 1	For upsetting 2-inch tires and smaller.....	\$16.00
No. 2	For upsetting 4-inch tires and smaller.....	28.00
No. 3	For upsetting 4-inch tires and smaller. This is a special machine, has two sets of loose jaws, can be adjusted for both light and heavy tires, also for upsetting axles up to 1¾ inches thick.....	35.00
No. 1	Approximate weight, 115 lbs.	
No. 2	Approximate weight, 245 lbs.	
No. 3	Approximate weight, 310 lbs.	

Discount.....

"VULCAN"

Tire and Axle Shrinker

The "Vulcan" Tire and Axle Shrinker is the latest addition to our list of Blacksmiths' Tools. This machine stands on the floor, occupies very little space, is a stout and powerful shrinker, highly recommended by all who have used it.

We guarantee it to shrink with perfect ease round or square edge tires from 4 x 1 inch down to the smallest buggy tire. It will also shrink axles up to 1¼-inch square. It grips the tire on its flat sides, both top and bottom, and holds it firmly until it is shrunk. Our superior grade of metal is used in its construction.

The jaws are made of hammered tool steel with machine cut teeth, hardened to suit the work. They are operated by a lever and are thrown in and out instantly, which makes it possible for one man to operate the machine. We warrant our "Vulcan" Tire and Axle Shrinker to upset tires and axles of the dimensions given above and to be of first-class material and workmanship.

"Vulcan" Tire and Axle Shrinkers

Warranted



No. 4

Price, with levers complete.....\$68.00

Approximate weight, 350 lbs.

Discount.....

Mole Tire Shrinkers

IMPROVED PATTERN
Warranted



The above cut shows the machine without our anti-kinking device and the tire in position.

Every Mole Tire Shrinker of our make is **warranted** to work correctly and to be of first-class material and workmanship.

Our Improved Mole Tire Shrinkers are made in the following sizes:

Price with lever as shown

No. 1	Without Anti-Kinker, 2½-inch bed, weight about 130 lbs.	.....\$16.00
No. 2	Without Anti-Kinker, 3 " " " "	215 " 24.00
No. 3	Without Anti-Kinker, 4 " " " "	270 " 29.00

Discount.....

Mole Tire Shrinkers

IMPROVED PATTERN
Warranted



The above cut shows the machine with our anti-kinking device and the tire in position.

Every Mole Tire Shrinker of our make is **warranted** to work correctly and to be of first-class material and workmanship.

Our improved Mole Tire Shrinkers are made in the following sizes:

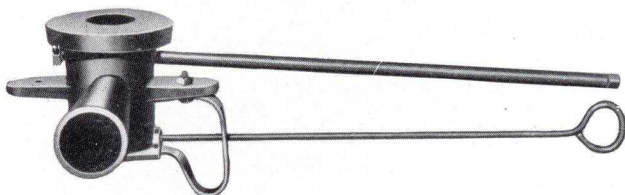
Price with lever as shown

No. 2	With Anti-Kinker, 3-inch bed, approximate weight, 230 lbs.	... \$25.00
No. 3	With Anti-Kinker, 4 " " " " 290 "	... 30.00

Discount

Tuyere Irons

NORTON'S PATENT



An Excellent Tuyere

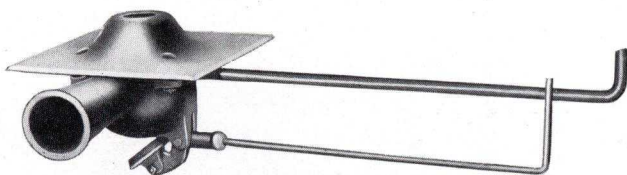
To regulate the blast, turn the large rod.

The cinders and ashes may be removed by drawing out the small rod which opens the slide.

The levers and spring are readily changed to either side for right or left hand use.

No. 1	Heavy pattern, weight about 26 lbs.	Price each, \$4.00
No. 2	Light pattern, " " 20 "	" " 3.50

WARREN'S PATENT



Very Simple and Easily Adjusted

The blast is regulated by simply revolving the ball, which has three unequal sides. Open the bottom valve, and all cinders and ashes drop out.

No. 1	Heavy pattern, weight about 30 lbs.	Price each, \$4.40
No. 2	Light pattern, " " 18 "	" " 4.00

Discount.....

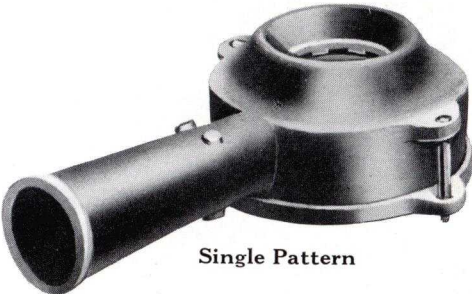
Tuyere Irons
DUCK NEST



Single Pattern A

No. 5A Single. Weight, 8 lbs.....Price per dozen, \$13.00

DUCK NEST



Single Pattern

No. 1	Single.	Weight, 11 lbs.....	Price per dozen, \$16.00
No. 2	"	15 "	" " " 20.00
No. 3	"	18 "	" " " 24.00

DUCK NEST



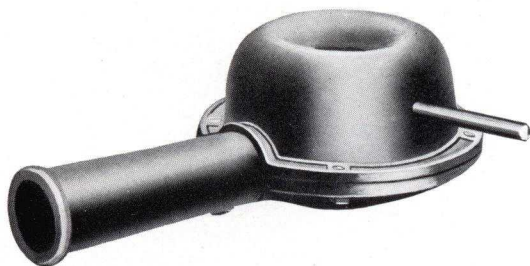
Double Pattern

No. 2	Double.	Weight, 17 lbs.....	Price per dozen, \$24.00
No. 10A	"	11 "	" " " 16.00

Discount.....

Tuyere Irons

CLARK

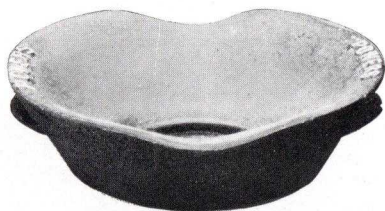


These tuyere irons are made with ball valves, are convenient and durable.

Price List

No. 1	Weight about 18 lbs.	Price each, \$2.60
No. 2	" " 21 "	" " 3.10
No. 3	" " 26 "	" " 3.60
No. 4	" " 45 "	" " 5.20

The Powers Patent Fire Pot



This fire pot can be used on most of our tuyere irons. It prevents the fire from spreading too much and produces a compact, bright heat. It reduces the quantity of coal required and protects the tuyere iron.

Weight, about 24 lbs. Price each, \$2.80

Discount

Vulcan Anvil



We call the attention of blacksmiths and others to the **Vulcan Anvil**, the face of which is one solid piece of high grade tool steel, thoroughly welded to the body of the anvil by a patented process. It is then accurately ground and tempered, so it will stand the most severe test.

The horn is covered with, and its extremity made entirely of tough, untempered steel.

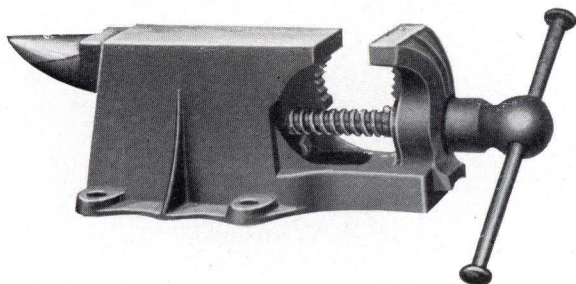
The body of the anvil is made of the best **Lake Superior Charcoal Iron**, and, being much more solid than wrought iron, the work being forged receives the full force of the blow. The face of the anvil will remain perfectly true after years of service, and it is warranted to be thoroughly welded and not to separate.

PRICE LIST

NO.					NO.				
00,	weighing about	5 lbs.	\$	2.00	11,	weighing about	110 lbs.	\$	11.00
0,	"	10	"	2.75	12,	"	120	"	12.00
1,	"	15	"	3.25	13,	"	130	"	13.00
2,	"	20	"	4.00	14,	"	140	"	14.00
3,	"	30	"	4.50	15,	"	150	"	15.00
4,	"	40	"	5.25	16,	"	160	"	16.00
5,	"	50	"	6.00	17 $\frac{1}{2}$,	"	175	"	17.50
6,	"	60	"	6.50	20,	"	200	"	20.00
7,	"	70	"	7.25	22 $\frac{1}{2}$,	"	225	"	22.50
8,	"	80	"	8.00	25,	"	250	"	25.00
9,	"	90	"	9.00	30,	"	300	"	30.00
10,	"	100	"	10.00	40,	"	400	"	40.00

Discount.

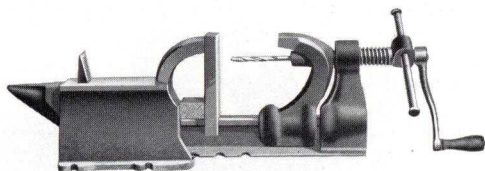
Combination Anvil and Vise



The face of the anvil and jaws of vise are cast chilled, the screw and handle are made of wrought steel. This tool is used extensively in small shops and by farmers. Dealers will find it a ready seller. Size of anvil face, $2\frac{3}{4} \times 7$ inches. Width of vise jaws, $2\frac{3}{4}$ inches. Jaws open $3\frac{1}{4}$ inches. Weight, 25 lbs.

Price per dozen

ANVIL VISE AND DRILL COMBINED



A Combination of an Anvil, a Vise and a Drill as the name implies.

All cast iron parts are made of the best Lake Superior Charcoal Iron, of the proper mixture to insure greatest strength. The draw bar is made of steel rail and will not break. The jaws and face of the anvil are hardened, accurately ground and polished.

The chuck is fitted with $\frac{3}{8}$ " square shank, unless otherwise ordered.

If ordered equipped for round shank bit, it will be furnished at a small additional charge.

Width of Jaw	$3\frac{1}{2}$ in.	Vise Jaw will open	6 in.
Depth of Throat	$5\frac{1}{2}$ "	Average weight	41 lbs.
List Price, each			

Discount

Wood Workers' Vise



Length of jaws,
4½ inches.
Opens 9 inches.

The jaws of
our vises are
steel-faced.
The square
beams are
planed true on

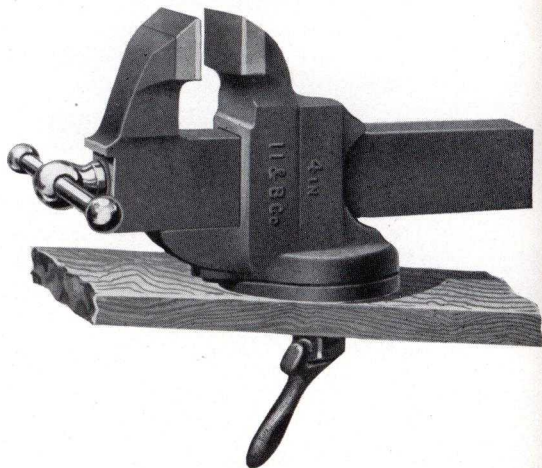
all sides. The screws are cut with a deep, square thread, and the heads of the screws and the levers are turned and polished. A nut and washer attached to the screw at the extreme end of the beam, as shown in cuts, take up the wear on the screw and thus prevent any lost motion, so that the jaw will respond instantly to every movement of the screw.

Price.....\$12.00

Pattern Makers' Quick Acting Vise

Length of jaws,
4 inches.
Opens 8 inches.

The movable
jaw of this vise
can be set instantly
at any distance
from the station-
ary jaw without a
turn of the screw.
The latter is used
only in securing a
firm grip on the



article placed in the vise. It is without equal for handiness and good service.

Price.....\$13.00

Discount.....

Parallel Machinists' Vise



PRICE LIST

LENGTH OF JAWS INCHES	OPENS INCHES	PRICE
2½	2½	\$11.00
3	3½	13.00
3½	4½	15.00
4	4½	17.00
4½	5	19.00
5	7	21.00
6	8	40.00

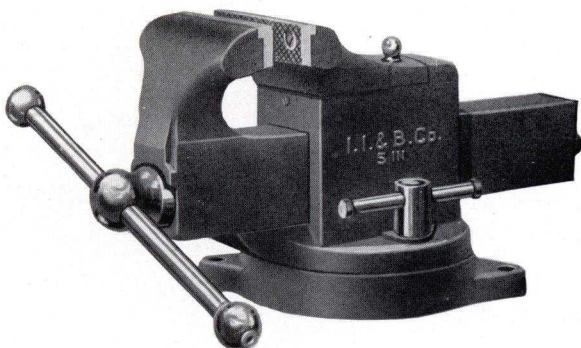
The jaws of these vises are faced with tempered steel, serrated to insure a good grip.

The nut at end of main screw takes up all wear and leaves no lost motion. The beams are planed accurately and the finished parts are neatly polished.

Swivel Self-Adjusting Machinists' Vise

PRICE LIST

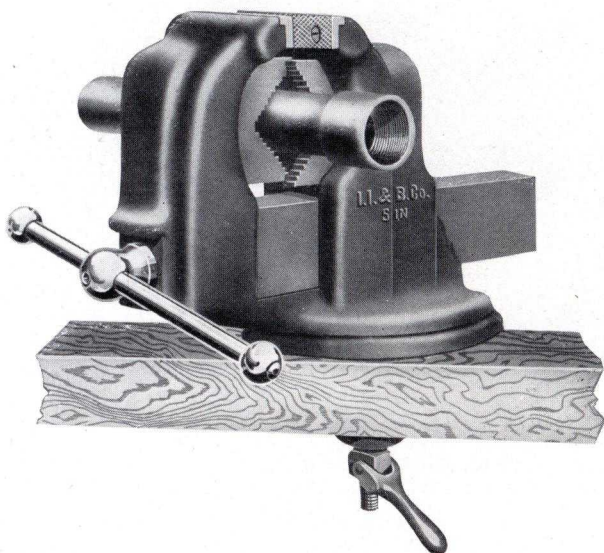
LENGTH OF JAWS INCHES	PRICE
3¼	\$16.00
3⅝	18.00
4½	23.00
5	25.00
5½	30.00
6	32.00



These jaws are faced with tempered steel and serrated. The beams are planed to insure a nice fit. The finished parts are polished and everything is first class.

Discount.....

Combination Pipe Vise



Length of jaws, $4\frac{3}{4}$ inches.

Price.....\$25.00

Will hold 3-inch pipe and under.

Length of jaws, $5\frac{1}{2}$ inches.

Price.....\$36.00

Will hold 4-inch pipe and under.

This vise has steel-faced jaws and pipe grips which are carefully tempered to insure the highest efficiency.

"Vulcan Brand" Jack Screws

Our Jack Screws have been known to the Hardware and Railway Supply Trades for more than half a century for their superior quality and the leading jobbers will have none other.

We have recently adopted the trade mark "Vulcan" for our line of Jack Screws to enable the trade to distinguish them more readily from inferior goods.

Only stock of first-class quality is used in their manufacture; the screw is made of one piece wrought steel and best adapted for extra heavy duty.

Specially designed machinery is used throughout and the method of production is improved from time to time to insure up-to-date results in quality.

All work is guaranteed and every Jack Screw is warranted to carry the load given on the following pages.

We are equipped to furnish special screws of any design not shown in this catalogue on quick notice at reasonable prices. Estimates on special work furnished promptly on request.

The "I. I. & B. Co." Jack Screws have pleased the trade for more than fifty years. Use none other and you will satisfy your customers and increase your patronage.

"Vulcan" Locomotive Jack Screws



Capacity of Locomotive Jack Screws

1 1/4-inch Screws.....	10 tons
1 1/2 " "	12 "
1 3/4 " "	16 "
2 " "	20 "
2 1/4 " "	24 "
2 1/2 " "	28 "
3 " "	36 "

Price List of

“Vulcan” Locomotive Jack Screws

SIZE	HEIGHT OF STAND	HEIGHT OVER ALL	RISE OF SCREW	LIST PRICE	SIZE	HEIGHT OF STAND	HEIGHT OVER ALL	RISE OF SCREW	LIST PRICE
In.	In.	In.	In.		In.	In.	In.	In.	
1 $\frac{1}{4}$ x 4	4	6 $\frac{1}{2}$	2 $\frac{1}{4}$	\$ 2.90	2 $\frac{1}{4}$ x10	10	13 $\frac{3}{4}$	6 $\frac{3}{4}$	\$ 8.25
1 $\frac{1}{4}$ x 6	6	8 $\frac{1}{2}$	4 $\frac{1}{4}$	3.10	2 $\frac{1}{4}$ x12	12	15 $\frac{3}{4}$	8 $\frac{3}{4}$	9.00
1 $\frac{1}{4}$ x 8	8	10 $\frac{1}{2}$	6 $\frac{1}{4}$	3.40	2 $\frac{1}{4}$ x14	14	17 $\frac{3}{4}$	10 $\frac{3}{4}$	10.00
1 $\frac{1}{4}$ x10	10	12 $\frac{1}{2}$	8 $\frac{1}{4}$	3.80	2 $\frac{1}{4}$ x16	16	19 $\frac{3}{4}$	12 $\frac{3}{4}$	11.00
1 $\frac{1}{4}$ x12	12	14 $\frac{1}{2}$	10 $\frac{1}{4}$	4.20	2 $\frac{1}{4}$ x18	18	21 $\frac{3}{4}$	14 $\frac{3}{4}$	12.00
1 $\frac{1}{4}$ x14	14	16 $\frac{1}{2}$	12 $\frac{1}{4}$	4.60	2 $\frac{1}{4}$ x20	20	23 $\frac{3}{4}$	16 $\frac{3}{4}$	13.25
1 $\frac{1}{2}$ x 4	4	6 $\frac{3}{4}$	1 $\frac{3}{4}$	3.25	2 $\frac{1}{4}$ x22	22	25 $\frac{3}{4}$	18 $\frac{3}{4}$	14.50
1 $\frac{1}{2}$ x 5	5	7 $\frac{3}{4}$	2 $\frac{3}{4}$	3.50	2 $\frac{1}{4}$ x24	24	27 $\frac{3}{4}$	20 $\frac{3}{4}$	15.75
1 $\frac{1}{2}$ x 6	6	8 $\frac{3}{4}$	3 $\frac{3}{4}$	3.75	2 $\frac{1}{2}$ x 6	6	10	2 $\frac{1}{4}$	7.75
1 $\frac{1}{2}$ x 8	8	10 $\frac{3}{4}$	5 $\frac{3}{4}$	4.25	2 $\frac{1}{2}$ x 6 $\frac{1}{2}$	6 $\frac{1}{2}$	10 $\frac{1}{2}$	2 $\frac{3}{4}$	8.00
1 $\frac{1}{2}$ x10	10	12 $\frac{3}{4}$	7 $\frac{3}{4}$	4.75	2 $\frac{1}{2}$ x 8	8	12	4 $\frac{1}{4}$	8.75
1 $\frac{1}{2}$ x12	12	14 $\frac{3}{4}$	9 $\frac{3}{4}$	5.25	2 $\frac{1}{2}$ x10	10	14	6 $\frac{1}{4}$	9.75
1 $\frac{1}{2}$ x14	14	16 $\frac{3}{4}$	11 $\frac{3}{4}$	6.00	2 $\frac{1}{2}$ x12	12	16	8 $\frac{1}{4}$	10.75
1 $\frac{1}{2}$ x16	16	18 $\frac{3}{4}$	13 $\frac{3}{4}$	6.75	2 $\frac{1}{2}$ x14	14	18	10 $\frac{1}{4}$	12.00
1 $\frac{3}{4}$ x 6	6	9	3 $\frac{1}{2}$	4.50	2 $\frac{1}{2}$ x16	16	20	12 $\frac{1}{4}$	13.25
1 $\frac{3}{4}$ x 8	8	11	5 $\frac{1}{2}$	5.00	2 $\frac{1}{2}$ x18	18	22	14 $\frac{1}{4}$	14.50
1 $\frac{3}{4}$ x10	10	13	7 $\frac{1}{2}$	5.75	2 $\frac{1}{2}$ x20	20	24	16 $\frac{1}{4}$	15.75
1 $\frac{3}{4}$ x12	12	15	9 $\frac{1}{2}$	6.25	2 $\frac{1}{2}$ x22	22	26	18 $\frac{1}{4}$	17.00
1 $\frac{3}{4}$ x14	14	17	11 $\frac{1}{2}$	6.75	2 $\frac{1}{2}$ x24	24	28	20 $\frac{1}{4}$	18.25
1 $\frac{3}{4}$ x16	16	19	13 $\frac{1}{2}$	7.50	2 $\frac{1}{2}$ x26	26	30	22 $\frac{1}{4}$	20.00
1 $\frac{3}{4}$ x18	18	21	15 $\frac{1}{2}$	8.50	2 $\frac{1}{2}$ x28	28	32	24 $\frac{1}{4}$	22.00
2 x 5	5	8 $\frac{1}{2}$	2	5.00	2 $\frac{1}{2}$ x30	30	34	26 $\frac{1}{4}$	24.00
2 x 6	6	9 $\frac{1}{2}$	3	5.25	2 $\frac{1}{2}$ x32	32	36	28 $\frac{1}{4}$	26.00
2 x 8	8	11 $\frac{1}{2}$	5	6.00	3 x 8	8	13	3 $\frac{1}{2}$	17.50
2 x10	10	13 $\frac{1}{2}$	7	6.75	3 x14	14	19	9 $\frac{1}{2}$	19.50
2 x12	12	15 $\frac{1}{2}$	9	7.50	3 x16	16	21	11 $\frac{1}{2}$	20.75
2 x14	14	17 $\frac{1}{2}$	11	8.25	3 x18	18	23	13 $\frac{1}{2}$	22.00
2 x16	16	19 $\frac{1}{2}$	13	9.25	3 x20	20	25	15 $\frac{1}{2}$	23.25
2 x18	18	21 $\frac{1}{2}$	15	10.25	3 x22	22	27	17 $\frac{1}{2}$	24.50
2 x20	20	23 $\frac{1}{2}$	17	11.50	3 x24	24	29	19 $\frac{1}{2}$	25.75
2 x22	22	25 $\frac{1}{2}$	19	12.50	3 x26	26	31	21 $\frac{1}{2}$	27.00
2 x24	24	27 $\frac{1}{2}$	21	13.50	3 x28	28	33	23 $\frac{1}{2}$	28.50
2 $\frac{1}{4}$ x 6	6	9 $\frac{3}{4}$	2 $\frac{3}{4}$	7.00	3 x30	30	35	25 $\frac{1}{2}$	30.00
2 $\frac{1}{4}$ x 8	8	11 $\frac{3}{4}$	4 $\frac{3}{4}$	7.50	3 x36	36	41	31 $\frac{1}{2}$	36.00

In ordering use figures shown in first column.

Levers sent only when ordered and will be charged extra.

Discount.....



“Vulcan” Car Box Jack Screws

These jack screws are made with swivel caps of the same diameter as the head, closed at the top to prevent dirt entering between the cap and screw.

The screws are made of one piece wrought steel and the cap is held in place by a set screw running in a groove cut in the top of the screw.

Price List of Car Box Jack Screws

SIZE	HEIGHT OF STAND	HEIGHT OVER ALL	RISE OF SCREW	LIST PRICE	SIZE	HEIGHT OF STAND	HEIGHT OVER ALL	RISE OF SCREW	LIST PRICE
In.	In.	In.	In.		In.	In.	In.	In.	
1 $\frac{1}{2}$ x 5	5	8	2 $\frac{3}{4}$	\$4.00	2 $\frac{1}{4}$ x 6	6	10 $\frac{1}{4}$	2 $\frac{3}{4}$	\$ 7.50
1 $\frac{1}{2}$ x 6	6	9	3 $\frac{3}{4}$	4.25	2 $\frac{1}{4}$ x 8	8	12 $\frac{1}{4}$	4 $\frac{3}{4}$	8.00
1 $\frac{1}{2}$ x 8	8	11	5 $\frac{3}{4}$	4.75	2 $\frac{1}{4}$ x10	10	14 $\frac{1}{4}$	6 $\frac{3}{4}$	8.75
1 $\frac{1}{2}$ x10	10	13	7 $\frac{3}{4}$	5.25	2 $\frac{1}{4}$ x12	12	16 $\frac{1}{4}$	8 $\frac{3}{4}$	9.50
1 $\frac{1}{2}$ x12	12	15	9 $\frac{3}{4}$	5.75	2 $\frac{1}{4}$ x14	14	18 $\frac{1}{4}$	10 $\frac{3}{4}$	10.50
1 $\frac{3}{4}$ x 6	6	9 $\frac{1}{4}$	3 $\frac{1}{2}$	5.00	2 $\frac{1}{4}$ x16	16	20 $\frac{1}{4}$	12 $\frac{3}{4}$	11.50
1 $\frac{3}{4}$ x 8	8	11 $\frac{1}{4}$	5 $\frac{1}{2}$	5.50	2 $\frac{1}{2}$ x 6	6	10 $\frac{1}{2}$	2 $\frac{1}{4}$	8.25
1 $\frac{3}{4}$ x10	10	13 $\frac{1}{4}$	7 $\frac{1}{2}$	6.25	2 $\frac{1}{2}$ x 6 $\frac{1}{2}$	6 $\frac{1}{2}$	11	2 $\frac{3}{4}$	8.50
1 $\frac{3}{4}$ x12	12	15 $\frac{1}{4}$	9 $\frac{1}{2}$	6.75	2 $\frac{1}{2}$ x 8	8	12 $\frac{1}{2}$	4 $\frac{1}{4}$	9.25
2 x 5	5	9	2	5.50	2 $\frac{1}{2}$ x10	10	14 $\frac{1}{2}$	6 $\frac{1}{4}$	10.25
2 x 6	6	10	3	5.75	2 $\frac{1}{2}$ x12	12	16 $\frac{1}{2}$	8 $\frac{1}{4}$	11.25
2 x 8	8	12	5	6.50	2 $\frac{1}{2}$ x14	14	18 $\frac{1}{2}$	10 $\frac{1}{4}$	12.50
2 x10	10	14	7	7.25	2 $\frac{1}{2}$ x16	16	20 $\frac{1}{2}$	12 $\frac{1}{4}$	13.75
2 x12	12	16	9	8.00	3 x 8	8	14	3 $\frac{1}{2}$	18.00
2 x14	14	18	11	8.75					

Capacity

1 $\frac{1}{2}$ -inch Screws.....	12 tons	2 $\frac{1}{4}$ -inch Screws.....	24 tons
1 $\frac{3}{4}$ “ “	16 “	2 $\frac{1}{2}$ “ “	28 “
2 “ “	20 “		

In ordering use figures shown in first column.

Levers sent only when ordered and will be charged extra.

Discount.....

"Vulcan" Cable Reel Jack Screws



We warrant every Cable Reel Jack Screw to safely carry the load given as its capacity.

These jacks are carefully made and fitted, and have substantial hard wood bases well braced to stand the heavy work they are intended for.

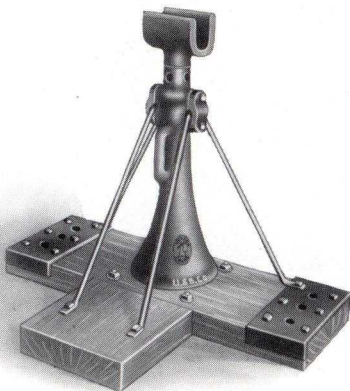
Levers will be sent only when ordered and will be charged extra.

SIZE	DIAMETER OF SCREW	HEIGHT OVER ALL WHEN CLOSED	RISE	CAPACITY	WEIGHT ABOUT	SIZE OF BASE	PRICE
	In.	In.	In.	Tons	Lbs.	In.	
No. 1	2	15	5	20	44	2x10x20	\$13.50
No. 2	2	19	9	20	50	2x10x20	15.00
No. 3	2	21	11	20	55	2x10x22	16.00
No. 4	2	27	17	20	72	2x11x30	18.00
No. 5	2½	16	5	28	47	2x11x20	16.50
No. 6	2½	22	11	28	75	2x11x30	20.25
No. 7	2½	28	17	28	89	2x11x30	24.00
No. 8	3	29	15	36	130	3x11x30	36.00
No. 9	3	35	21	36	143	3x11x30	42.00

Discount

HEAVY DUTY

“Vulcan” Cable Reel Jack Screws



We warrant every Heavy Duty Cable Reel Jack Screw to safely carry the load given as its capacity. Are carefully made and fitted.

The Wood Base is made of well seasoned oak. The top of the Main Base is covered with a steel plate at both ends and is equipped with 3 one-inch holes which may be used to fasten down onto the floor if desired.

Levers will be sent only when ordered and will be charged extra.

Cap will take $2\frac{5}{8}$ -inch axle or smaller.

SIZE	DIAMETER OF SCREW	HEIGHT OVER ALL WHEN CLOSED	RISE INCHES	CAPACITY IN TONS	WEIGHT ABOUT	SIZE OF BASE	LIST PRICE
No. 51	2 in.	$30\frac{1}{2}$ in.	17	20	128	$2\frac{3}{4}$ x22x36	\$45.00

Discount.....

“Vulcan” Telescopic Jack Screws



Style No. 1

Style No. 2

This jack consists of two screws, one working within the other, operating simultaneously, thus the double screw raises the load with double speed and nearly twice the height of the stand; therefore this jack can be used in closer quarters than the ordinary style.

Style 1 Represents the jack with wrench.

Style 2 Represents the jack with ratchet lever.

SIZE	CAPACITY	HEIGHT OF STAND	HEIGHT OVER ALL CLOSED	NET RISE	TOTAL HEIGHT OPEN	PRICE STYLE 1	PRICE STYLE 2
	Tons	In.	In.	In.	In.		
No. 1	10	7½	10½	11	21	\$14.00	\$20.00
No. 2	25	11	14	16	30	18.00	24.00
No. 3	25	13½	17	23	40	22.00	28.00
No. 4	25	18	21½	31	52	28.00	30.00
No. 5	25	22½	26	36	61	30.00	36.00

Discount.....

"Vulcan" Wagon Jack Screws



These jacks are made of one piece steel screws and cast iron stands.

Capacity

$1\frac{1}{2}$ -inch. 12 tons

$1\frac{3}{4}$ " 16 "

SIZE	HEIGHT OF STAND	HEIGHT OVER ALL	RISE OF SCREW	CAPACITY	LIST PRICE
$1\frac{1}{2}$ x12	12 in.	$15\frac{5}{8}$ in.	$9\frac{3}{4}$ in.	12 tons	\$5.25
$1\frac{1}{2}$ x14	14 "	$17\frac{5}{8}$ "	$11\frac{3}{4}$ "	12 "	6.00
$1\frac{1}{2}$ x16	16 "	$19\frac{5}{8}$ "	$13\frac{3}{4}$ "	12 "	6.75
$1\frac{3}{4}$ x14	14 "	$17\frac{3}{4}$ "	$11\frac{1}{2}$ "	16 "	6.75
$1\frac{3}{4}$ x16	16 "	$19\frac{3}{4}$ "	$13\frac{1}{2}$ "	16 "	7.50

Discount.....



“Vulcan” Steel Press or House Raising Screws

For Pressing Cider, Wine, Tobacco, Lard, Cloth, etc.

These screws are made of one piece wrought steel with cast iron nuts and caps.

Capacity same as locomotive jack screws.

SIZE	HEIGHT OVER ALL	LIST PRICE	SIZE	HEIGHT OVER ALL	LIST PRICE	SIZE	HEIGHT OVER ALL	LIST PRICE
In.	In.		In.	In.		In.	In.	
1 $\frac{3}{4}$ x12	12	\$ 4.80	2 $\frac{1}{4}$ x42	42	\$14.10	2 $\frac{3}{4}$ x34	34	\$19.90
1 $\frac{3}{4}$ x14	14	5.10	2 $\frac{1}{4}$ x44	44	14.60	2 $\frac{3}{4}$ x36	36	20.60
1 $\frac{3}{4}$ x16	16	5.40	2 $\frac{1}{4}$ x46	46	15.00	2 $\frac{3}{4}$ x38	38	21.30
1 $\frac{3}{4}$ x18	18	5.70	2 $\frac{1}{4}$ x48	48	15.40	2 $\frac{3}{4}$ x40	40	22.00
1 $\frac{3}{4}$ x20	20	6.00	2 $\frac{1}{4}$ x50	50	16.00	2 $\frac{3}{4}$ x42	42	22.70
2 x12	12	6.00	2 $\frac{1}{2}$ x12	12	8.50	2 $\frac{3}{4}$ x44	44	23.40
2 x14	14	6.40	2 $\frac{1}{2}$ x14	14	9.00	2 $\frac{3}{4}$ x46	46	24.10
2 x16	16	6.80	2 $\frac{1}{2}$ x16	16	9.60	2 $\frac{3}{4}$ x48	48	24.80
2 x18	18	7.20	2 $\frac{1}{2}$ x18	18	10.20	2 $\frac{3}{4}$ x50	50	25.50
2 x20	20	7.60	2 $\frac{1}{2}$ x20	20	10.80	2 $\frac{3}{4}$ x52	52	26.20
2 x22	22	8.00	2 $\frac{1}{2}$ x22	22	11.30	2 $\frac{3}{4}$ x54	54	26.90
2 x24	24	8.40	2 $\frac{1}{2}$ x24	24	11.90	2 $\frac{3}{4}$ x56	56	27.60
2 x26	26	8.80	2 $\frac{1}{2}$ x26	26	12.40	2 $\frac{3}{4}$ x58	58	28.30
2 x28	28	9.20	2 $\frac{1}{2}$ x28	28	12.90	2 $\frac{3}{4}$ x60	60	29.00
2 x30	30	9.60	2 $\frac{1}{2}$ x30	30	13.40	3 x18	18	17.00
2 x32	32	10.00	2 $\frac{1}{2}$ x32	32	13.90	3 x20	20	17.60
2 x34	34	10.40	2 $\frac{1}{2}$ x34	34	14.40	3 x24	24	19.20
2 x36	36	10.80	2 $\frac{1}{2}$ x36	36	14.90	3 x26	26	20.00
2 x38	38	11.20	2 $\frac{1}{2}$ x38	38	15.50	3 x28	28	20.80
2 x40	40	11.60	2 $\frac{1}{2}$ x40	40	16.00	3 x30	30	21.60
2 $\frac{1}{4}$ x12	12	7.50	2 $\frac{1}{2}$ x42	42	16.50	3 x32	32	22.40
2 $\frac{1}{4}$ x14	14	7.90	2 $\frac{1}{2}$ x44	44	17.10	3 x34	34	23.20
2 $\frac{1}{4}$ x16	16	8.30	2 $\frac{1}{2}$ x46	46	17.60	3 x36	36	24.00
2 $\frac{1}{4}$ x18	18	8.80	2 $\frac{1}{2}$ x48	48	18.10	3 x38	38	24.80
2 $\frac{1}{4}$ x20	20	9.30	2 $\frac{1}{2}$ x50	50	18.60	3 x40	40	25.60
2 $\frac{1}{4}$ x22	22	9.80	2 $\frac{1}{2}$ x52	52	19.10	3 x42	42	26.40
2 $\frac{1}{4}$ x24	24	10.30	2 $\frac{1}{2}$ x54	54	19.70	3 x44	44	27.20
2 $\frac{1}{4}$ x26	26	10.70	2 $\frac{1}{2}$ x56	56	20.30	3 x46	46	28.00
2 $\frac{1}{4}$ x28	28	11.10	2 $\frac{1}{2}$ x58	58	20.80	3 x48	48	28.80
2 $\frac{1}{4}$ x30	30	11.50	2 $\frac{1}{2}$ x60	60	21.30	3 x50	50	29.60
2 $\frac{1}{4}$ x32	32	11.90	2 $\frac{3}{4}$ x24	24	16.40	3 x52	52	30.40
2 $\frac{1}{4}$ x34	34	12.30	2 $\frac{3}{4}$ x26	26	17.10	3 x54	54	31.20
2 $\frac{1}{4}$ x36	36	12.70	2 $\frac{3}{4}$ x28	28	17.80	3 x56	56	32.00
2 $\frac{1}{4}$ x38	38	13.20	2 $\frac{3}{4}$ x30	30	18.50	3 x58	58	32.80
2 $\frac{1}{4}$ x40	40	13.60	2 $\frac{3}{4}$ x32	32	19.20	3 x60	60	33.60

Discount.....

Peterson Chain Vise and Pulling Jack



The uses to which this tool may be applied advantageously are manifold. It will serve as a vise in many instances and again can be used as a pulling jack.

The cross bar is made of malleable iron to withstand severe usage, with cut thread screw of wrought steel and cast iron cap. The No. 2 is a slightly different design because of its adaptation to heavier work, such as railroad and contracting work.

No. 1 With 11 ft. of $\frac{3}{8}$ -inch chain, distance between chains 14 inches

No. 2 With 25 ft. of $\frac{5}{8}$ -inch chain, distance between chains 20 inches

List price No. 1. \$ 7.50

List price No. 2. 24.00

Discount.....



“Vulcan” Bell Base Ratchet Jack Screws

This jack has one piece wrought steel screw, cast-iron stand and cap, and steel ratchet pawl and malleable handle.

Capacity

2	-inch screws	24 tons
2 1/4	“ “	28 “
2 1/2	“ “	32 “
2 3/4	“ “	36 “
3	“ “	40 “

List Price of Bell Base Ratchet Jack Screws

SIZE	HEIGHT OF STAND	HEIGHT OVER ALL	RISE OF SCREW	LIST PRICE	SIZE	HEIGHT OF STAND	HEIGHT OVER ALL	RISE OF SCREW	LIST PRICE
In.	In.	In.	In.		In.	In.	In.	In.	
2 x10	6	10	3	\$15.50	2 1/2 x16	10	15 1/2	6 1/4	\$21.50
2 x12	8	12 1/2	5	16.00	2 1/2 x18	12	17 1/2	8 1/4	22.50
2 x14	10	14 1/2	7	16.75	2 1/2 x20	14	19 1/2	10 1/4	23.50
2 x16	12	16 1/2	9	17.50	2 1/2 x22	16	21 1/2	12 1/4	24.50
2 x18	14	18 1/2	11	18.25	2 1/2 x24	18	23 1/2	14 1/4	25.50
2 x20	16	20 1/2	13	19.00	2 1/2 x26	20	25 1/2	16 1/4	26.50
2 x22	18	22 1/2	15	19.75	2 1/2 x28	22	27 1/2	18 1/4	27.75
2 x24	20	24 1/2	17	20.50	2 1/2 x30	24	29 1/2	20 1/4	29.00
2 x26	22	26 1/2	19	21.50	2 1/2 x34	28	33 1/2	24 1/4	33.00
2 x28	24	28 1/2	21	22.50	2 1/2 x36	30	35 1/2	26 1/4	35.00
2 x30	26	30 1/2	23	23.50	2 1/2 x38	32	37 1/2	28 1/4	37.00
2 1/4 x12	8	12 1/2	4 3/4	18.00	2 3/4 x20	14	20	10	27.50
2 1/4 x14	10	14 1/2	6 3/4	19.00	2 3/4 x24	18	24	14	30.00
2 1/4 x16	12	16 1/2	8 3/4	20.00	2 3/4 x28	22	28	18	32.50
2 1/4 x18	14	18 1/2	10 3/4	21.00	2 3/4 x30	24	30	20	34.00
2 1/4 x20	16	20 1/2	12 3/4	22.00	2 3/4 x36	30	36	26	40.00
2 1/4 x22	18	22 1/2	14 3/4	23.00	2 3/4 x42	36	42	32	46.00
2 1/4 x24	20	24 1/2	16 3/4	24.00	3 x20	14	20	9 1/2	32.00
2 1/4 x26	22	26 1/2	18 3/4	25.00	3 x24	18	24	13 1/2	35.00
2 1/4 x28	24	28 1/2	20 3/4	26.00	3 x26	20	26	15 1/2	37.00
2 1/4 x30	26	30 1/2	22 3/4	27.00	3 x28	22	28	17 1/2	38.50
2 1/2 x12	6	11 1/2	2 1/4	19.50	3 x30	24	30	19 1/2	40.00
2 1/2 x14	8	13 1/2	4 1/4	20.50	3 x36	30	36	25 1/2	48.00

In ordering use figures shown in first column.

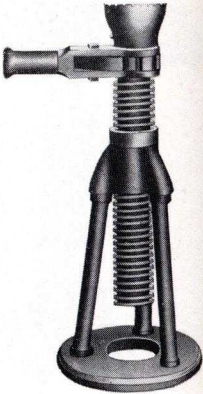
Discount.

**“Vulcan” Tripod Ratchet
Jack Screws**

Our tripod jack has one piece wrought steel screw and wrought steel legs and bases, brass nuts and steel ratchets, pawls and malleable handles.

Capacity

2¼-inch screws.....	28 tons
2½ “ “	32 “
2¾ “ “	36 “
3 “ “	40 “



SIZE	HEIGHT OF STAND	HEIGHT OVER ALL	RISE OF SCREW	LIST PRICE	SIZE	HEIGHT OF STAND	HEIGHT OVER ALL	RISE OF SCREW	LIST PRICE
In.	In.	In.	In.		In.	In.	In.	In.	
2¼x12	8	12½	4¾	\$47.00	2¾x20	14	20	12	\$62.50
2¼x14	10	14½	6¾	48.00	2¾x22	16	22	14	63.75
2¼x16	12	16½	8¾	49.00	2¾x24	18	24	16	65.00
2¼x18	14	18½	10¾	50.00	2¾x26	20	26	18	66.25
2¼x20	16	20½	12¾	51.00	2¾x28	22	28	20	67.50
2¼x22	18	22½	14¾	52.00	2¾x30	24	30	22	68.75
2¼x24	20	24½	16¾	53.00	2¾x36	30	36	28	73.00
2½x12	6	12	4¼	53.50	3 x18	12	18	9½	65.50
2½x14	8	14	6¼	54.50	3 x20	14	20	11½	67.00
2½x16	10	16	8¼	55.50	3 x22	16	22	13½	68.50
2½x18	12	18	10¼	56.50	3 x24	18	24	15½	70.00
2½x20	14	20	12¼	57.50	3 x26	20	26	17½	71.50
2½x22	16	22	14¼	58.50	3 x28	22	28	19½	73.00
2½x24	18	24	16¼	59.50	3 x30	24	30	21½	74.50
2½x26	20	26	18¼	60.75	3 x36	30	36	27½	79.00
2½x28	22	28	20¼	62.00	3 x38	32	38	29½	80.50
2½x30	24	30	22¼	63.25	3 x40	34	40	31½	82.00
2½x36	30	36	28¼	67.00	3 x44	38	44	35½	85.00
2¾x18	12	18	10	61.25	3 x48	40	46	39½	88.00

In ordering use figures shown in first column.

Discount.....

“Vulcan” Ratchet Carrying Jack Screw

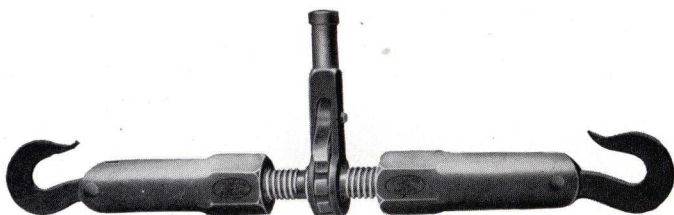


This jack has a steel base, brass nuts and wrought steel screws and legs. The ratchets, pawls and handles are made of steel and malleable iron.

Capacity.....	36	tons
Diameter of lifting screw.....	2 $\frac{3}{4}$	inches
Diameter of traverse screw.....	1 $\frac{5}{8}$	“
Length of lifting screw.....	18	“
Length of traverse screw.....	18	“
Height, over all.....	26	“
Weight, about.....	130	pounds
Price.....	\$140.00	

Discount.....

“Vulcan” Ratchet Pulling Jack Screw



This jack is of great value where a short, powerful pull is desired to bring joints and connections together. Adapted to all classes of structural work, in pile driving for pulling piles into correct alignment, for wrecking, etc. Made in two sizes.

No. 1	Length of jack when closed.....	33	inches
	Size of screw.....	1 3/4	"
	Run of screw.....	12	"
	Weight.....	50	pounds
	Capacity.....	10	tons
	List price.....		\$22.50

No. 2	Length of jack when closed.....	33	inches
	Size of screw.....	1 1/2	"
	Run of screw.....	12	"
	Weight.....	35	pounds
	Capacity.....	7	tons
	List price.....		\$17.50

Special sizes made to order.

Discount.....

"Vulcan" Track Jack Screw



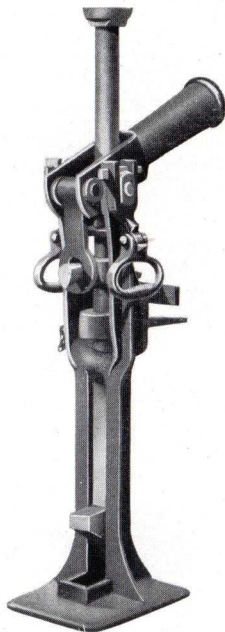
The screw, base and handle of this jack are made of wrought steel. The lifter is welded to the screw.

Capacity.....	12	tons
Diameter of screw.....	1½	inches
Length of screw.....	18	"

Price.....	\$10.00
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Discount.....

Jenne Friction Jack



The frame and lever sockets are of malleable iron. The pivots are of steel, the bearings are bronze. The rings and hangers are forged of special steel and the round lifting bar is made of wrought steel.

	CAPACITY TONS	HEIGHT OF JACK DOWN	RISE OF BAR	DIAMETER OF BAR	WEIGHT	LIST PRICE
Low down	5	23 in.	6½ in.	1½ in.	62 lbs.	\$20.00
No. 1	5	31 "	12 "	1½ "	68 "	20.00
No. 2	10	35 "	15 "	1¾ "	100 "	24.00

Discount

Cast Iron Jack Screws



These screws are cast with seamless threads which makes them very smooth and uniform.

DIAMETER OF SCREW	HEIGHT OVER ALL	SIZE OF PLATE	SIZE OF NUT	LIST PRICE
3 in.	18 in.	6 in. square	6 in. long	\$3.25
3 "	20 "	6 " "	6 " "	3.50
3 "	22 "	6 " "	6 " "	3.75
3 "	24 "	6 " "	6 " "	4.00
3 "	26 "	6 " "	6 " "	4.25
3 "	28 "	6 " "	6 " "	4.50
3 "	30 "	6 " "	6 " "	4.75
3 "	32 "	6 " "	6 " "	5.00
3 "	34 "	6 " "	6 " "	5.25
3 "	36 "	6 " "	6 " "	5.50

Discount.....

Wrought Bench Screws



These screws are made of wrought steel and have deep cut threads, movable collar and hardwood handle.

DIAMETER	LENGTH OVER ALL	LENGTH OF THREAD	PRICE PER DOZEN	WEIGHT PER DOZ. ABOUT
1 in.	16 in.	11 in.	\$10.40	55 lbs.
1 ¹ / ₈ "	16 "	11 "	12.00	68 "
1 ¹ / ₄ "	17 "	12 "	14.00	80 "
1 ¹ / ₂ "	21 "	15 "	21.00	125 "

Discount.....

Sad Irons

SILVER POLISHED DIAMOND BRAND



Our "Diamond Brand" silver polished sad irons are superior in quality and finish to any in the market. From the following sizes we can make up any assortment the trade may require: 4, 5, 6, 7, 8 and 9 lbs. each, with sharp or round points. We pack them in cases containing about 100 and 200 lbs. each, or in barrels of 600 to 800 lbs.

Price, silver polished	\$	per lb.
Price, nickel plated		" "

Pressing Irons

FINELY POLISHED DIAMOND BRAND



Can furnish these irons, used extensively for pressing suits and other clothing, in the following weights: 10, 12, 14, 15, 16, 18, 20, 22, 24, 26 and 28 lbs. each.

Price \$ per lb.

Tailor Irons

FINELY POLISHED DIAMOND BRAND



Can furnish tailor irons of the following weights: 12, 14, 15, 16, 18, 20, 22, 24, 26, 28, 30 and 32 lbs. each.

Price \$ per lb.

On the Following Pages We Show Our Patented Hercules Steel Trucks

These trucks have been in use several years for railway, steamship and general warehouse purposes. They have proven to be a grand success in strength, durability and easy running.

Hercules Steel Trucks will give excellent satisfaction on heavy work where the ordinary wood frame truck fails, and the smaller sizes can also be used to good advantage on light work.

Hercules Steel Trucks are constructed of the very best materials. The entire frames and axles are made of steel and the wheels of Lake Superior iron.

The angular shapes used in the frames afford strength combined with lightness. All parts are riveted and bolted together, which makes it impossible to rack the frames.

The handles are made of first-class hickory, which makes them strong and pleasing to the hands of the operator.

Hercules Steel Trucks are warranted against imperfections in material and workmanship and their make-up renders them practically indestructible.

We ask those who have not handled them heretofore to investigate and put them in stock at once.

“Hercules”

(Patented)



No. 2 Regular

Designed for general use

Full length.....	4 ft. 7 in.	Diameter of wheels.....	7½ in.
Width.....	21 “	Diameter of axle.....	1⅛ “
Weight.....	80 lbs.		

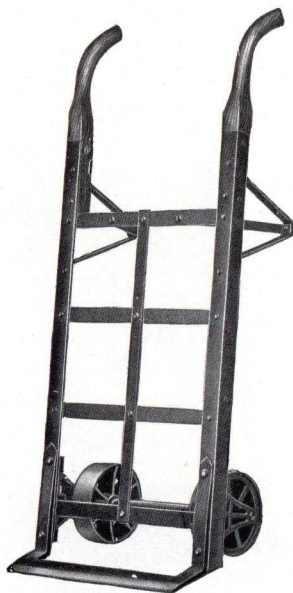
Price.....\$

Discount.....

**Light, strong, and practically indestructible. “Hercules”
Steel Trucks**

“Hercules”
LIGHT, STRONG AND PRACTICALLY
INDESTRUCTIBLE

(Patented)



No. 3 Regular

Designed for medium heavy work

Full length.....	5 in.	Diameter of wheels.....	8½ in.
Width.....	22 in.	Diameter of axle.....	1⅛ "
Weight.....	90 lbs.		

Price.....\$

Discount.....

**Why do you continue to purchase Wooden Trucks in an
 Iron and Steel Age?**

"Hercules"
LIGHT, STRONG AND PRACTICALLY
INDESTRUCTIBLE
 (Patented)



No. 4 Regular

Designed for all purposes where large size trucks are required.

Full length.....	5 ft. 7 in.	Diameter of wheels.....	10 $\frac{3}{8}$ in.
Width.....	2 "	Diameter of axle.....	1 $\frac{1}{4}$ "
Weight.....	135 lbs.		
Price.....			

Discount.....

**If there is economy in using Steel Bridges, there is economy
 in using Steel Trucks**

“Hercules”
LIGHT, STRONG AND PRACTICALLY
INDESTRUCTIBLE
 (Patented)



No. 4 A

Designed for all purposes where large size trucks are required, and with center straps welded to dash.

Full length.....	5 ft. 7 in.	Diameter of wheels.....	10 $\frac{3}{8}$ in.
Width.....	2 "	Diameter of axle.....	1 $\frac{1}{4}$ "
Weight.....	140 lbs.		

Price.....\$

Discount.....

You need no hospital for “Hercules” Trucks, as the Truck disease is entirely eliminated by their use

“Hercules”
EXTRA HEAVY, STRONG AND PRACTICALLY
INDESTRUCTIBLE
 (Patented)



No. 4 B

Designed for heaviest possible duty. The strongest truck ever placed on the market. Extra long arms to dash; reinforced side-rails, and extra heavy axle.

Full length.....	5 ft. 5 in.	Diameter of wheels.....	10 $\frac{3}{8}$ in.
Width.....	2 "	Diameter of axle.....	1 $\frac{1}{4}$ "
Weight.....	150 lbs.		
Price.....	\$		

Discount.....

**“Hercules” Steel Trucks do not shrink and swell, therefore
 the frame never becomes racked**

"Hercules"**LIGHT, STRONG AND PRACTICALLY
INDESTRUCTIBLE**

(Patented)

**No. 3 Barrel**

Designed for ordinary barrels, etc.

Full length.....	5 ft.	Diameter of wheels.....	8½ in.
Width at nose.....	16 in.	Diameter of axle.....	1⅛ "
Width at handles.....	25 "	Weight.....	102 lbs.
Price.....	\$		

Discount.....

**"Hercules" Steel Trucks cost practically the same as
Wooden Trucks. Which will you have?**

"Hercules"

LIGHT, STRONG AND PRACTICALLY INDESTRUCTIBLE

(Patented)

**No. 4 Barrel**

Designed for very heavy barrels and other articles.

Full length.....	5 ft. 7 in.	Diameter of wheels.....	10 $\frac{3}{8}$ in.
Width at nose.....	17 "	Diameter of axle.....	1 $\frac{1}{4}$ "
Width at handles.....	25 "	Weight.....	144 lbs.

Price.....\$

Discount.....

**Did you ever consider the expense of keeping Wooden
Trucks in repair?**

“Hercules”
LIGHT, STRONG AND PRACTICALLY
INDESTRUCTIBLE
 (Patented)



No. 4 C

Especially designed for cotton and paper mills, also for handling bulky freight.

Full length.....	5 ft. 9 in.	Diameter of wheels.....	13½ in.
Width.....	2 "	Diameter of axle.....	1¼ "
Weight.....	165 lbs.		
Price.....	\$		

Discount.....

You will in time purchase “Hercules” Steel Trucks. Why wait? Do it now.

Letter Copying Presses

WARRANTY

All our Copying Presses are warranted against imperfections in material and workmanship

Only the very best materials are used in the manufacture of our presses, and special attention is given to finish and ornamentation to make them neat and attractive.

Our ball-and-socket joint connecting the main screw with platen has proved a grand success. It has reduced breakage to a minimum, and given absolute satisfaction in every particular.

In ordering presses, the following abbreviations will be found very convenient.

	Abbreviated
Plain black.....	P. B.
Black and bronze.....	B. & B.
Black, carmine and bronze.....	B. & C.
Wheel.....	W.
Ball lever.....	B. L.

For Example

6 No. 4 B. Plain black wheel presses

6 No. 4 B. P. B. W. presses.

6 No. 10 U. Black and bronze wheel presses

6 No. 10 U. B. & B. W. presses.

6 No. 11 R. Black, carmine and bronze ball lever presses

6 No. 11 R. B. & C. B. L. presses.

Style B

WITH WHEEL OR BALL LEVER



Finished in Plain Black:

No. 4	Receives book	10x12 $\frac{1}{2}$ x3 $\frac{1}{8}$ in.	Weight about	65 lbs.	Price, \$	5.25
No. 5	"	10x15 x3 $\frac{3}{8}$	"	80	"	6.00
No. 6	"	11x16 x3 $\frac{7}{8}$	"	90	"	9.00
No. 8	"	12x18 $\frac{1}{2}$ x3 $\frac{7}{8}$	"	115	"	11.75
No. 9	"	14x18 $\frac{1}{2}$ x3 $\frac{7}{8}$	"	150	"	16.00

Finished in Black and Bronze:

No. 4	Receives book	10x12 $\frac{1}{2}$ x3 $\frac{1}{8}$ in.	Price, \$	5.75
No. 5	"	10x15 x3 $\frac{3}{8}$	"	7.00
No. 6	"	11x16 x3 $\frac{7}{8}$	"	10.50
No. 8	"	12x18 x3 $\frac{7}{8}$	"	13.50
No. 9	"	14x18 $\frac{1}{2}$ x3 $\frac{7}{8}$	"	18.00

Finished in Black, Carmine and Bronze:

No. 4	Receives book	10x12 $\frac{1}{2}$ x3 $\frac{1}{8}$ in.	Price, \$	6.50
No. 5	"	10x15 x3 $\frac{3}{8}$	"	7.75
No. 6	"	11x16 x3 $\frac{7}{8}$	"	11.75
No. 8	"	12x18 x3 $\frac{7}{8}$	"	14.75
No. 9	"	14x18 $\frac{1}{2}$ x3 $\frac{7}{8}$	"	20.00

Discount.....

Style U

WITH WHEEL OR BALL LEVER



The plates are accurately planed to insure perfect copies

Finished in Plain Black:

No. 10	Receives book	15x20 $\frac{1}{2}$ x4 $\frac{1}{4}$ in.	Weight about	240 lbs.	Price, \$18.00
No. 11	"	16x20 $\frac{1}{2}$ x4 $\frac{1}{4}$	"	" 245 "	" 20.00
No. 13	"	18x22 $\frac{1}{2}$ x4 $\frac{3}{8}$	"	" 305 "	" 23.00
No. 15	"	20x24 $\frac{1}{2}$ x4 $\frac{1}{4}$	"	" 330 "	" 28.00
No. 18	"	20x30 $\frac{1}{2}$ x6 $\frac{3}{8}$	"	" 715 "	" 60.00
No. 19	"	24x30 $\frac{1}{2}$ x6 $\frac{3}{8}$	"	" 860 "	" 70.00

Discount.....

Style R WITH WHEEL OR BALL LEVER



The plates are accurately planed

Steel Arch Presses

When several copies are to be made from the same writing, more pressure is required and also more time to allow the ink to be transfused through the several thicknesses of paper. For this purpose we would recommend our Steel Arch Presses, especially when but little time can be given.

Finished in Plain Black

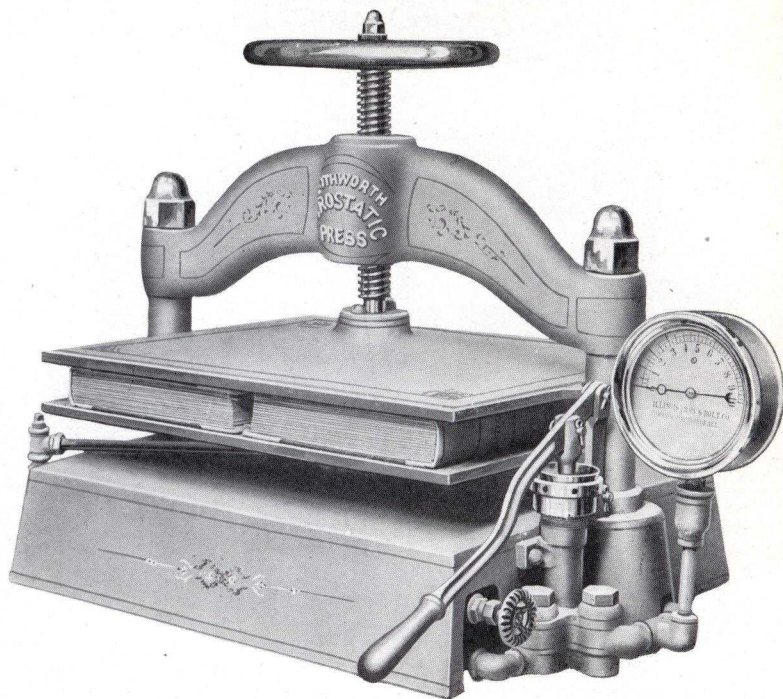
No. 10	Receives book	15x20	x3 $\frac{7}{8}$ in.	.....	Price, \$30.50
No. 11	"	16x20	x3 $\frac{7}{8}$ "	.....	" 31.00
No. 12	"	16x21	x3 $\frac{7}{8}$ "	.....	" 31.50
No. 14	"	18x25	x3 $\frac{7}{8}$ "	.....	" 42.00
No. 16	"	21x26	x4 $\frac{1}{4}$ "	.....	" 57.50
No. 17	"	25x27 $\frac{3}{4}$	x4 $\frac{5}{8}$ "	.....	" 80.00

Nos. 10 and 11 are furnished with plain wheel as shown in above cut, but all other sizes have a pilot wheel (with four outside spicates).

Discount.....

Style W

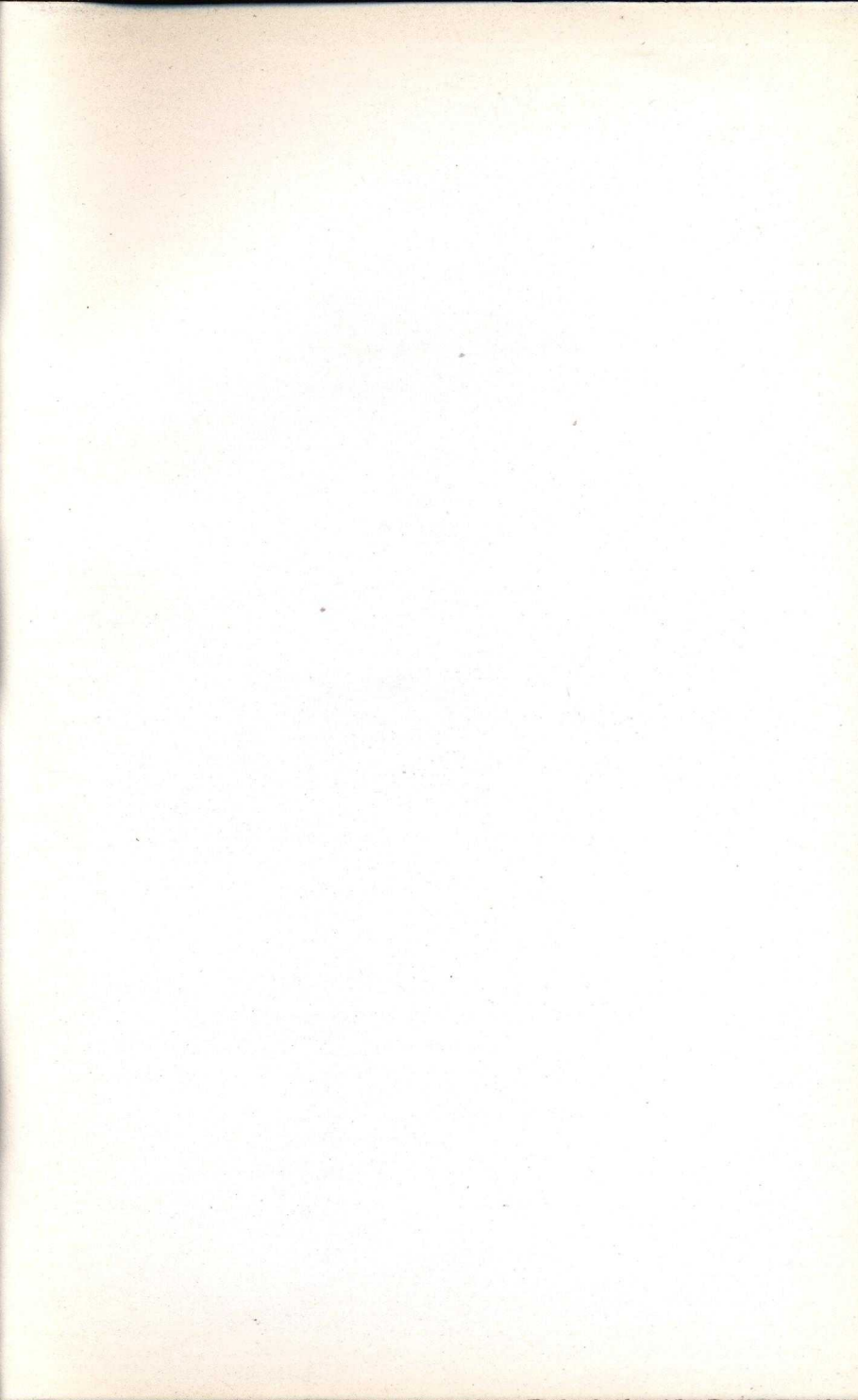
HYDROSTATIC COPYING PRESS



These machines have a capacity of ten tons pressure, which is quickly and easily applied by operating the lever. The platens are raised or lowered to suit the thickness of the book by turning the wheel at the top. The surfaces of the plates are accurately planed, which, together with the enormous pressure exerted by the hydrostatic process, insures perfect copies. The pressure can be instantly relieved by slightly turning the small wheel at the right of the base. An accurate gauge is furnished with each machine which constantly indicates the exact pressure applied. The whole machine is very strong, massive and durable. Directions for operating are furnished with each press.

No. 13	Receives book	18x22x3 $\frac{5}{8}$ in.	Price, \$125.00
No. 15	“ “	20x25x4 $\frac{5}{8}$ “	“ 140.00

Discount.....



BAKER, JONES
HAUSAUER, INC.



BUFFALO
N. Y.

